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Fire Management Plan

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TABLE OF CONTENTS

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Acronyms

ACEC	Area of Critical Environmental Concern
AUM	Animal Unit Month
BLM	Bureau of Land Management
CCC	Civilian Conservation Corps
CRMP	Coordinated Resource Management Plan
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERMA	Extensive Recreation Management Area
FLPMA	Federal Land Policy and Management Act
FMAP	Fire Management Activity Plan
FMP 98	Fire Management Plan 1998
FMU	Fire Management Unit
FMZ	Fire Management Zone
FPA	Fire Program Analysis
FPU	Fire Planning Unit
FUDS	Formerly Used Defense Site
GAPA	Ground to Air Pilotless Aircraft
HF	Hazardous Fuels
HMP	Habitat Management Plan
IAA	Initial Attack Analysis
LUP	Land Use Plan
MEL	Most Efficient Level
MFP	Management Framework Plan
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFMAS	National Fire Management Analysis System
NHS	National Historic Site
OHV	Off-Highway Vehicle
PFC	Properly Functioning Condition
PNC	Potential Natural Community
RMP	Resource Management Plan
SLFO	Salt Lake Field Office
SASEM	Simple Approach Smoke Estimation Model
SEAT	Single Engine Air Tanker(s)
SHPO	State Historic Preservation Office
SLFO	Salt Lake Field Office, BLM
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
T&E	Threatened and Endangered
TAD	Tooele Army Depot
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
UWC	Utah Wilderness Coalition
VRM	Visual Resource Management
VUD	Visitor Use Days
WHA	Wildlife Habitat Area
WSA	Wilderness Study Area
WUI	Wildland Urban Interface

I. Introduction

On December 3, 2003, President George W. Bush signed into law the Healthy Forests Restoration Act of 2003 (http://www.whitehouse.gov/infocus/healthyforests/) to reduce the threat of destructive wildfires while upholding environmental standards and encouraging early public input during review and planning processes. The legislation is based on sound science, helps further the President's Healthy Forests Initiative pledge to care for America's forests and rangelands, reduce the risk of catastrophic fire to communities, help save the lives of firefighters and citizens, and protect threatened and endangered species.

The Healthy Forests Restoration Act:

- Strengthens public participation in developing high priority forest health projects;
- Reduces the complexity of environmental analysis allowing federal land agencies to use the best science available to actively manage land under their protection;
- Provides a more effective appeals process encouraging early public participation in project planning; and
- Issues clear guidance for court action against forest health projects.

The Administration and a bipartisan majority in Congress supported the legislation and are joined by a variety of environmental conservation groups.

The Salt Lake Field Office (SLFO) is committed to follow the Healthy Forest Initiative while following the National Fire Plan (http://www.fireplan.gov/content/home/), which is a long-term investment to help protect communities and natural resources, and most importantly, the lives of firefighters and the public. It is a long-term commitment based on cooperation and communication among federal agencies, states, local governments, tribes, and interested publics.

A. Purpose

The BLM Director, Office of Fire and Aviation, has instructed all Field Offices to develop a new or revise their existing Fire Management Plan (FMP) for all areas subject to wildland fires.

New scientific information such as Condition Classes and Fire Regime information will be added to this document. Currently, fire management policy is based on the Salt Lake District Office Bureau of Land Management Proposed Fire Management Plan Amendment, April 1998 (FMP 98); it assists the SLFO in achieving land use plan and activity level plan goals and objectives.

Due to Public Law 106-65-OCT. 5, 1999 planning for the SLFO is frozen in its current form pending completion of a Defense Department study; no new planning/actions would be implemented or analyzed for Fiscal Year 2004.

The FMP 98 was developed for all areas subject to wildland fires in compliance with the Federal Wildland Fire Management Policy and Program Review-1995 and 2001; The Interagency Fire Management Plan Template; and A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10 Year Comprehensive Strategy Implementation Plan http://www.fireplan.gov/reports/7-19-en.pdf.

B. Relationship to Environmental Compliance

The FMP 98 meets the National Environmental Policy Act (NEPA) requirements, state, and federal regulatory requirements. It amended the following plans by introducing fire as a critical natural process into the ecosystem by providing a comprehensive and consistent policy of how fires are managed for all public lands administered by the field office:

1) Pony Express Resource Management Plan (1990); 2) Box Elder Resource Management Plan (1986); 3) Isolated Tract Planning Analysis (1985); 4) Park City Management Framework Plan (1982); and 5) Randolph Management Framework Plan (1980).

C. Collaboration

The SLFO has participated in various multi-agency groups writing Coordinated Resource Management Plans (CRMP), including the Clover Creek Watershed CRMP and Goose Creek Multiple Use Management Plan. The Clover Creek Watershed CRMP was finalized in April 1997.

A Memorandum of Understanding (MOU) exists between the State of Utah Air Quality Board, United States Department of Agriculture Forest Service (USDA FS), and the United States Department of the Interior BLM (USDI BLM). This MOU states that the involved parties mutually agree to comply with the Federal Clean Air Act, State Implementation Plan, and subsequent amendments to the Utah Clean Air Act Title 19 of the Utah Code as amended.

Based on these suppression agreements and state laws, it may be necessary for the BLM to take aggressive suppression action on 1) state and private lands adjacent to public lands; or 2) wildland fires that start on public lands and threaten state and private land.

Notice of Intent

The BLM published a Notice of Intent to prepare these Land Use Plan Amendments in the Federal Register in April, 2004.

Scoping

Five public meetings will be held throughout Utah to introduce the public to the FMP revision and LUP amendments process; informing local residents, cooperating agencies, tribes, and citizen groups about goals and objectives of the project; meeting and greeting interested parties; organizing further collaborative efforts; and scoping out potential project-related issues. A FMP planning bulletin was mailed 6/21/04 and a public scoping meeting was held 7/14/2004 at the SLFO from 6:30 to 8:30 p.m.

D. Authorities

The statutes cited herein authorize and provide the means for managing wildland fire on lands or threatening lands under Federal jurisdiction:

Department Manual 910 and BLM Manual 9200; Organic Administration Act, Act of June 4, 1897 (16 USC 551); Weeks Law, Act of March 1, 1911 (16 USC 563); Protection Act of September 20, 1922 (42 Stat. 857; 16 USC 594); Economy Act of 1932, Act of June 30, 1932

(47 Stat. 417; 31 USC 1535**,** 41 USC 686); Taylor Grazing Act of June 28, 1934 (48 Stat. 1269; 43 USC 315); O. and C. Act of August 28, 1937 (50 Stat. 875; 43 USC 1181e); Bankhead-Jones Farm Tenant Act, Act of July 22, 1937 (7 USC 1010, 1011); National Park Service Acts as amended (67 Stat. 495; 16 USC 1b); Federal Property and Administrative Service Act of 1949 (40 USC 471; et seq.); Granger-Thye Act, Act of April 24, 1950 (16 USC 572); Reciprocal Fire Protection Act, Act of May 27, 1955 (69 Stat. 66; 42 USC 1856a **,** 42 USC 1856); Act of July 14, 1955, Clean Air Act, as amended (42 USC 7401 et seq.); Multiple-Use Sustained-Yield Act of 1960 (16 USC 528)); Wilderness Act, Act of September 3, 1964 (16 USC 1131, 1132); National Wildlife Refuge System Administration Act of 1966 as amended (80 Stat. 927; 16 USC 668dd through 668ee); National Environmental Policy Act of 1969 (42 USC 4321); Alaska Native Claims Settlement Act of December 18, 1971 (85 Stat. 688; 43 USC 1601); Endangered Species Act of 1973 (16 USC 1531); Disaster Relief Act of May 22, 1974 (88 Stat. 143; 42 USC 5121); Federal Fire Prevention and Control Act of October 29, 1974 (88 Stat. 1535; 15 USC 2201); National Forest Management Act, Act of October 22, 1976 (16 USC 1600 et seq.); Federal Land Policy and Management Act of 1976 (90 Stat. 2743); Federal Grant and Cooperative Agreement Act of 1977 (PL 950224, as amended by PL 97-258, September 13, 1982 (96 Stat. 1003; 31 USC 6301 thru 6308); Alaska National Interest Lands Conservation Act of December 2, 1980 (94 Stat. 2371); Supplemental Appropriation Act of September 10, 1982 (96 Stat. 837); Wildfire Suppression Assistance Act, Act of April 7, 1989 (PL 100-428, as amended by PL 101-11, April 7, 1989, 42 USC 1856); Indian Self-Determination and Education Assistance Act (PL 93-638) as amended; National Indian Forest Resources Management Act (P. L. 101-630 November 28 1990); The Clean Air Act Amendments of 1990; Tribal Self-Governance Act of 1994 (PL 103-413); Department of the Interior and Related Agencies Appropriations Act (PL 103-32).

II. Relationship to Land Management Planning/Fire Policy

Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy (June, 2003); Review and Update of the 1995 Federal Wildland Fire Management Policy 2001; the 10-Year Comprehensive Strategy a Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 2001; National Fire Plan http://www.fireplan.gov/content/home/ ; Federal Land Policy Management Act 1976 (FLPMA); Departmental Categorical Exclusion Department of the Interior Manual 516 DM, Chapter 2, Appendix 1, 1.12 and 1.13; U.S. DOI BLM Prescribed Fire Management (July 2000); SLFO Normal Fire Year Rehabilitation Plan and Emergency Fire Rehabilitation 2001; EFR Handbook H-1742-1; Wildlife HMPs'; Noxious Weed EA; Grazing EIS; Utah Standards for Rangeland Health; Riparian Area Strategic Plan; ACEC Activity Plans; Allotment Management Plans; Conservation Agreements; Executive Orders; Interim Management Policy for Lands Under Wilderness Review H-8550-1; Wild Horse Herd Management Plans; Section 106 of the NHPA; 620 DM 3, BLM Handbook 1742-1, and other site-specific plans related to LUPs/RMPs.

This activity level plan incorporates recommendations regarding land management planning by:

- using information about current conditions and land management objectives as a basis to develop fire management goals and objectives;
- revising or updating land management plans to include fuel treatments, prescribed fire, mechanical/chemical treatments;

- exploring options within existing laws to allow for the use of fire to achieve goals of ecosystem health;
- evaluating ecosystem condition by type and prioritize areas for the reintroduction of fire; mechanical/chemical treatments to meet resource objectives and reduce hazards;
- addressing the highest-priority needs in ecosystem assessment, monitoring, and management to determine the appropriate scope of fire use, consistent with historical fire regimes; and
- developing/implementing a strategic plan that educates the general public about the role of fire.
- incorporating new information regarding Fire Regime (FR) and Condition Class (CC) have been added to this document.

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III. Wildland Fire Management Strategies

A. General Management Considerations

In order to comply with the direction provided in the current National Fire Plan guidance, the SLFO LUPs and FMPs, as well as all other SLFO Plans, would implement the following fire management guidance across the Fire Planning Unit:

Fire Planning Unit (FPU) (*Map 1, Appendix A*):

- The FPU is defined to describe the geographic planning area. It can include a single or multiple LUP planning area(s), cross-jurisdictional boundaries including adjacent BLM office lands, and/or other partner lands. The FPU will be a key component of the new FPA software program. FPA defines a FPU as the geographic area for fire management analysis. Fire Planning Units are not predefined by the agency administrative office boundaries and may relate to one or more agencies. They may be described spatially. A Fire Planning Unit consists of one or more Fire Management Units.

Fire Management Unit (FMU) (*Map 2, Appendix A*):

- An FMU is any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, major fire regime groups, etc., that set it apart from the management characteristics of an adjacent FMU. FMUs are scalable and cannot be separated geographically. The FMUs may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. The development of FMUs should avoid redundancy. Each FMU should be unique as evidenced by management strategies, objectives, and attributes.

Planning

Fire management goals and objectives, including the reintroduction of fire, are incorporated into land management planning to restore and maintain sustainable ecosystems. Planning is a collaborative effort, with all interested partners working together to develop and implement management objectives that cross jurisdictional boundaries.

Fire management goals, objectives, and actions are defined, developed, and updated in comprehensive FMPs. The use of fire to sustain ecosystem health is based on sound scientific principles and information and is balanced with other societal goals, including public health and safety, air quality, and other specific environmental concerns.

Reintroduction of Fire

Fire would be introduced into an ecosystem to maintain natural balance and minimize undesirable wildland fire effects. Prescribed fire would be implemented according to SLFO LUPs, sound scientific information, and land resource/fire objectives. Fire management practices are consistent for areas with similar management objectives, regardless of jurisdiction.

Education

To provide clear and consistent information to internal and external audiences about existing conditions, management goals/objectives, the role of fire in achieving these objectives, and

alternatives in addition to consequences of various fire management strategies. As a result, informed audiences would participate fully in the land and fire management planning processes.

Following are some of the key policy points from the 1995 Federal Wildland Fire Review:

- Protection of human life is reaffirmed as the first priority in wildland fire management.
- Wildland fire, as a critical and necessary natural process, must be reintroduced into the ecosystem.
- Land management agency administrators must have the ability to choose from the full spectrum of fire management actions, from prompt suppression to allowing fire to function in its natural ecological role.
- Where wildland fire cannot be safely reintroduced because of hazardous vegetation build-ups, some form of hazardous fuel reduction must be considered, particularly in Wildland Urban Interface (WUI) areas.
- Structural fire protection in the WUI is the responsibility of state, local, and tribal governments.
- Federal agencies must place more emphasis on education of the American people about how and why we use fire in natural resource management.
- No one entity can resolve and manage all the wildland fire issues; it must be a cooperative effort.

B. Wildland Fire Management Goals

The Proposed Action/Integrated Fire/Resource Management Plan emphasizes strategic fire management planning that integrates resource management goals, objectives, and concerns with fire management activities.

Key functions of wildland fire suppression philosophy are as follows:

1) Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science,
2) Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3) Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

C. Wildland Fire Management Options

The Proposed Action utilizes a full range of Appropriate Management Response (AMR) suppression strategies:

Monitoring from a distance
Fire situations where inactive fire behavior and low threats require only periodic monitoring from a nearby location or aircraft.

Monitoring on-site
Fire situation that require the physical placement of monitors on the fire site to track the fire's spread, intensity, and/or characteristics.

Confinement
Actions taken when fires are not likely to have resource benefit and an analysis of strategic alternative indicates threats from the fire do not require costly deployment of large numbers of suppression resources for mitigation or suppression. Typically these fires will have little to no on-the-ground activity and fire movement remains confined within a pre-determined area bounded by natural barriers or fuel changes.

Monitoring plus contingency actions
Monitoring is carried out on fires managed for resource benefits but circumstances necessitate preparation of contingency actions to satisfy external influences and ensure adequate preparation for possible undesirable developments.

Monitoring plus mitigation actions
Actions on fires managed for resource benefits that either pose real, but not necessarily immediate, threats or do not have a totally naturally defensible boundary. These fires are monitored but operations actions are developed and implemented to delay, direct, or check fire spread, or to contain the fire to a defined area, and/or to ensure public safety (through signing, information, and trail/area closures).

Initial attack
Action where an initial response is taken to suppress wildland fires, which is consistent with firefighter and public safety and values at risk to be protected.

Large fire suppression with multiple strategies
This action categorizes fires where a combination of tactics such as direct attack, indirect attack, and confinement by natural barriers are utilized to accomplish protection objectives as directed in a Wildland Fire Situation Analysis (WFSA).

Control and extinguishment
Actions taken on a fire when the selected WFSA alternative indicates a control strategy using direct attack. Sufficient resources are assigned to achieve control of the fire minimizing acreage burned.

The decision on whether wildland fires might be monitored, minimally suppressed, or aggressively attacked and the types of tactics used to suppress the fires would be based on decision criteria that would include resource management objectives, resource values, other values at risk, fire season severity, predicted weather and fire behavior, suppression costs, and other criteria specific to the fire site and time of occurrence.

Fire suppression emphasizes managing wildland fire in order to meet resource management objectives with the goal of safely reintroducing fire in ecosystems while minimizing costs and protecting resource values. Fire suppression would utilize aggressive initial attack strategy with a combination of direct and/or indirect tactics in areas where fire would be not desired (FMU labels A and B) while a less aggressive monitoring or confinement strategies may be utilized in the areas where fire would be desired or of no concern (FMU labels C and D).

D. Wildland Fire Management Strategies by Fire Management Unit

The FMUs were delineated into relatively homogenous management polygons which have definable resource conditions, resource management objectives, and management constraints. These areas were identified on a map, and narrative management guidance was developed for each unit. The district was divided into four fire management categories that define the role and response that wildland fire has in a particular ecosystem. These four fire management categories were labeled "A," "B," "C," and "D." Each of these categories were then subdivided into numerical sub-units (i.e., A-1, A-5, B-9, etc.) based on each sub-unit's unique resource, social, political, and geographic characteristics. The four main fire management categories ("A," "B," "C," and "D") are defined as follows:

Category "A": Where wildland fire is not desired.

Category "A" is designated for two primary reasons. First, wildland fires in these areas have adverse environmental impacts on the ecosystem. These impacts include such factors as the destruction of crucial wildlife habitat, conversion of native vegetation to exotic plant species, establishment of weed species, increased soil loss, reduced water quality, and damage to cultural and historical resources. The second reason for designating an area as a category "A" is primarily related to social, economic, and/or political concerns and impacts. These impacts include public and fire fighter safety; threats to adjacent communities and property owners; threats to improvements such as residences, communication sites, industrial sites, and range improvements; smoke impacts to communities and airport operations; and disturbance to high use recreation areas.

Category "A" areas are where fire is not a regular, natural part of the ecosystem, or where fire has more harmful impacts than benefits to the ecosystem. Fire has generally played a negative role in these areas by altering the native vegetation and allowing introduction of exotic species such as cheatgrass. Introduction of these exotic species has changed the size and interval of fires and has altered the natural species composition of the sites disrupting the natural secession of the native plant communities. As a result, increased size and frequency of fires allows continued and increased disturbance to native plant communities, destroys wildlife habitat, and produces other adverse impacts to the ecosystem. Because the native species generally lack an ability to out compete introduced and exotic species following a fire, rehabilitation projects are required to establish desirable vegetation and prevent soil loss and other undesirable natural consequences. Key examples in the Salt Lake Field Office include the salt desert shrub, black sagebrush, and big sagebrush shrub communities.

Prescribed fire for resource management is not recommended nor desired in these units due to fire's adverse environmental impacts. However, prescribed fire may be used to establish fuelbreaks and perform hazardous fuel reduction when the benefits of mitigating the potential for a large spreading fire outweigh the impacts of the fuels management project. In addition, other forms of fuels management designed to protect these fire-sensitive areas are recommended and may include: mechanical manipulation, grazing management, seeding to less flammable and more desirable species, vegetative fuelbreaks, and other management actions.

Category "B": Where unplanned wildland fire will likely cause negative effects, but these effects may be mitigated through fuels management, prescribed fire, or other strategies.

Unplanned wildland fires in category "B" produce similar adverse and harmful impacts as in category "A." This adverse response to wildland fires is due to a combination of fire sensitivity and abnormal wildland fuels accumulations that produce larger, more severe fires than would normally occur in a healthy ecosystem. Due to this, the primary objective is to limit and suppress wildland fires within these areas. However, category "B" areas may respond positively to properly managed and planned prescribed fires. Unlike category "A" areas, prescribed fire may be used to reintroduce fire into the ecosystem and meet resource management objectives. Small, limited fires can improve vegetation diversity and/or revitalize old decadent plant communities. In addition, prescribed fire is used to reduce hazardous fuel loadings, thus mitigating and reducing the impacts should a wildland fire occur. The key examples in the Salt Lake Field Office are those areas where the absence of fires has resulted in replacement of diverse vegetation communities with monotypic stands of less desirable species. These areas include dense stands of juniper or decadent stands of big sagebrush. These plant communities may have little vegetation and age class diversity, resulting in accumulations of hazardous and volatile fuels.

Fuels management is a key to mitigating the negative impacts of unplanned wildland fire in these areas. Fuels management options may include prescribed fire, mechanical manipulation, seeding of less flammable and more desirable species, vegetation greenstripping, and other management strategies.

Category "C": Where wildland fire is desired to manage ecosystems, but there are constraints because of the existing vegetation due to past fire exclusion.

These are areas where wildland fire is a natural part of the ecosystem. The health and diversity of the vegetation, soils and wildlife have evolved and are enhanced or dependent upon the natural consequences of fire. In normal circumstances, the existing native vegetation will naturally re-vegetate after fire. Key ecosystem examples on the SLFO include: juniper with perennial grasslands, aspen groves and big sagebrush with perennial grasses, and other upper elevation plant communities. Although these ecosystems benefit from both unplanned wildland fires and planned prescribed fires, use of either as a management tool may be limited by constraints. These constraints include threats to adjacent developments and residential communities, smoke impacts, lack of manageable fire boundaries, political concerns, and economics of management. Because unplanned wildland fires or wildland fires can be beneficial in these areas, the appropriate fire management response may utilize less aggressive suppression strategies and tactics that result in more acreage burned than under a more aggressive fire suppression response.

Prescribed fire use in these areas is recommended both to meet resource management objectives and as fuels management to mitigate the constraints that may limit using less aggressive suppression in wildland fire situations. Fuels management may be necessary to define more manageable wildland fire boundaries, to protect and minimize the severity and

impact of wildland fires on existing plant communities, and to protect values in adjacent units (i.e.: resource values, developments, etc.). Fuels management activities may involve prescribe fire, mechanical manipulation, fuelbreak development, and other management strategies.

Category "D": Areas where wildland fires may burn without constraints associated with resource conditions, social, economic, or political considerations.

The ecosystem response of these areas is similar to category "C," except there are no constraints to the use of fire. Most often the appropriate fire management response in these areas is to monitor the fire and let the fire play out its natural role in the ecosystem. The key ecosystem example on the Salt Lake Field Office for this category is the vegetation communities located in the mudflat areas. Vegetation in these areas is sparse and there is little to no threat to resource values, improvements, or adjacent ownerships. In addition, because of their isolation, social, economic, or political considerations are unlikely to occur.

FMU Descriptions

Introduction

Plant communities of the west look different today than they did 200 years ago. Most of these differences have come about because natural fire regimes have been altered, which has changed the distribution, composition, and structure of rangeland vegetation and the introduction of introduced exotic annuals. Many locations have had the fire return interval lengthened because of fire suppression and livestock grazing, which removes the fine fuels, that carries fires in several fuel types. This general decrease in fire frequency in these locations has allowed conifers to expand into non-forested areas at the forest-upland boundary; tree densities to increase in savanna-like stands of juniper and aspen (i.e. juniper encroachment of upland shrub areas) and shrub densities to increase, which has caused herbaceous vegetation to decrease or become nonexistent. In other areas, the converse occurs and fire frequencies have increased. The most pronounced change occurs in our more arid sites where the introduction of exotic annuals [i.e., cheatgrass (*bromus tectorum*)] into these vegetation types has initiated wildland fire at short fire return intervals into areas where fire was not a part of the natural regime. This change has also caused monocultures in some landscapes.

This shorter fire return interval diminishes shrub cover and once dominant bunchgrasses in favor of the introduced exotic annuals. This scenario provides more fine fuels in understories, especially where fire suppression and grazing has not removed the buildup in plant material. Fuel composition change of this nature also changes the fire intensities to where the native vegetation is killed or the fire return interval is too short for natural regeneration allowing the introduced exotic annuals and other invaders to displace the native vegetation. This loss of cover and change in the competition for soil nutrients can also alter the exposure of the soil raising the risk of wind and water erosion and reducing water storage and production.

Desert Shrub (Salt Desert Shrub)

Historically, wildland fire is not part of healthy communities of these vegetation types; when fires occurred, they were small and scattered and had little effect on the vegetation community. Introduced exotic annuals have successfully invaded these vegetation types over the years to become the dominant vegetation. The addition of these fine fuels has allowed the once barren areas between plants to fill in, making a more contiguous fuel base, which, once ignited, spreads wildfire much more readily and burns many more acres. Consequently, most of this conversion has occurred due to wildfires. Over the past 20-30 years, many areas have sustained an increase of acreage, resulting in large blocks of monoculture vegetation. As the acreage of cheatgrass increases, wildfire frequency and intensity increases, the fire return interval shortens, the difficulty to control wildfires increases, and the complexity of suppression operations would increase suppression costs (See Figure 3.1.).

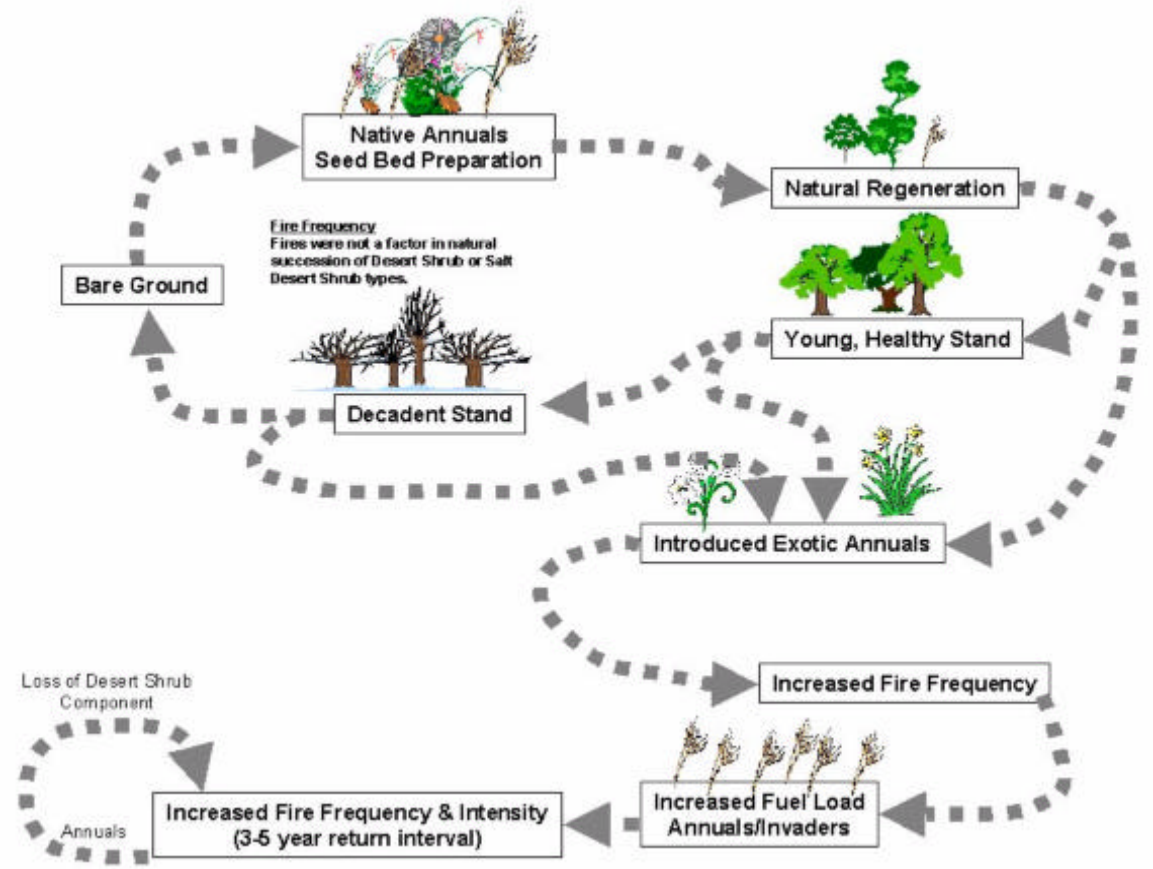
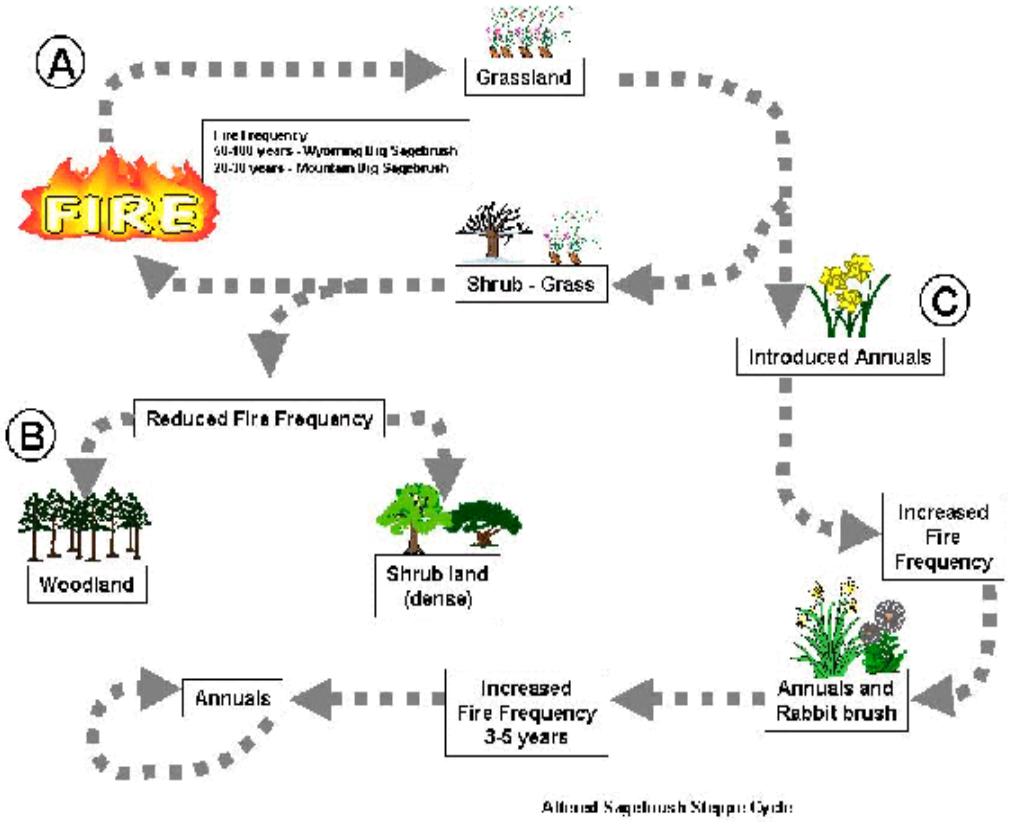


Figure 3.1 Salt Desert Succession

Semi-Desert Shrub

In this vegetation type, introduced exotic annuals are a problem similar to those mentioned in the desert shrub type; the difference is that stands of big sagebrush and juniper are more prevalent in these types. Fuel loading in this vegetation type is generally higher. The past several years of aggressive fire suppression and active livestock grazing has increased the risk of catastrophic events (See Figure 3-2).



Semi-desert/Upland Succession

Three common pathways of succession in the semi-desert/upland community. Pathway A represents a succession from a grassland to a shrub-grass dominated plant community, with fire acting to move the shrub-grass community back to a grassland. Pathway B represents succession of a shrub-grass dominated plant community to either a woodland (dominated mostly by juniper) or a shrubland, caused by a reduction in fire occurrence. Pathway C represents succession of a shrub-grass dominated plant community to a community dominated by introduced annual grasses, characterized by an increase in fire occurrence. Introduced annual grasses have invaded these communities partially as a result of excessive grazing pressure. Once dominated by introduced annual grasses, the community tends to remain this way because of frequent fire, which prevents shrubs from establishing. (Adapted from Vavra et al. (Editors), 1994. Ecological Implications of Livestock Herbivory in the West.) (Eastside Draft EIS/Chapter 2/Page 94.) Semi-desert type is more susceptible to vegetation conversion due to the moisture regime and landscape topography.

Upland
Sagebrush and juniper stands are the dominant vegetation in this type; however, historically, cool season bunchgrasses were more common in the lower elevation of this type. The areas once occupied with the bunchgrasses have yielded to other more volatile perennials and introduced exotic annuals. The increase in volatile fine fuel is an encroachment in this vegetation type and has changed the fire regime.

Another encroachment problem occurs in this vegetation type. Fire return interval has been lengthened due to past aggressive fire suppression, allowing juniper to successfully invade into the sagebrush stands. The noticeable difference is that juniper is now more prevalent at lower elevations.

Sagebrush Steppe
The natural regeneration cycle for the sagebrush vegetation type has been altered through aggressive fire suppression and active heavy livestock use. Wildfire was a natural part of this vegetation type, experiencing a stand replacing event, generally every 50-100 years. Removing wildfire has created a situation that has allowed the densities of the sagebrush to increase while decreasing several grass species and reducing the diversity of the vegetation type. In several areas, the sagebrush has become a monoculture with old, even aged densely populated stands which are decaying and susceptible to devastation from disease or wildfire. The decline in stand health also contributes to the encroachment into these stands by juniper. Upper elevations of this vegetation type contain pockets of aspen and high country conifer, which have unique fuel loading characteristics explained in the mountain vegetation type. These pockets generally occur on north facing slopes.

Juniper/Closed-Canopy Juniper
Past aggressive fire suppression has also altered the juniper vegetation type. Lack of wildland fire has allowed these stands to increase in density by out-competing understory plant species and eventually eliminating them. This situation has side effects which over time eliminates the seed bank in the soil needed for natural regeneration, increases soil erosion, and depletes the groundwater capabilities in surface springs and shallow wells. The dispersed junipers with their open canopies do not easily carry a fire. However, scattered in this vegetation type are pockets of heavy juniper stands where the canopies have closed. These dense stands present a more hazardous fuel situation than the dispersed junipers. When the live fuel moisture dips below the 90% level, the areas become very volatile and large wildland fires have occurred. These fires are very difficult to control, raise suppression costs, and jeopardize fire fighter and public safety.

Mountain Trees and Shrubs
This vegetation type consists of stands of quaking aspen, lodgepole pine, white fir, serviceberry and snowberry. Sagebrush and juniper stands are still prevalent and contribute similar fuel loading problems. The moisture regime and elevation tend to lessen the intensity, frequency, and complexity of these wildland fires.

High Country Conifer
This area occurs on north aspects and more protected areas which retain snowpack longer in the higher elevations in this vegetation type. In some areas, there are stands of old white fir and

Douglas fir, that during drought years when fuel moisture is low, become very susceptible to naturally ignited wildland fire. These old stands generally have high volumes of dead and down heavy fuels resulting in long duration, high intensity fires, which are devastating to the microbiotic crusts and to the soils.

Aspen

A small amount of the District contains stands of aspen that have been threatened by Douglas fir, white fir, Lodgepole pine, and Engelmann spruce encroachment. Prescribed fire can be used to rejuvenate these stands and eliminate the encroachment problem if these sites are treated while the conifer densities are low enough to allow low intensity burns. This would prevent aspen sites from evolving into late seral conifer communities.

Fire Regime/Condition Class (FRCC)

Multiple, undesirable ecological changes have occurred in the field office. These changes include invasion of cheatgrass, loss of salt desert shrub, degraded sagebrush-steppe, and increased stand density and expansion of pinyon-juniper woodlands. These type conversions often correspond to losses of native biodiversity, decreased sustainability, and altered fire regimes.

The dominant vegetation types occurring in the field office include Salt Desert Shrub, Sagebrush-Steppe, and Pinyon-Juniper Forests. Each vegetation type evolved with a distinct fire frequency, severity, and suite of effects, which provided for long-term sustainability. Within these vegetation types, management activities such as fire suppression, livestock grazing, urbanization, and the spread of invasive species have changed these fire regimes. Fuel treatment applications outlined in this FMP intend to move ecosystems and fire regimes closer to their historic conditions.

For a given vegetation type, the FRCC concept describes the degree of departure from natural vegetation composition and historic fire frequency/severity. This measure describes both the health of the fire regime, and the appropriateness of the vegetation community for the site. Condition Class 1 corresponds to landscapes where these variables are intact, while Condition Class 3 landscapes have highly altered ecological integrity. Condition Class 2 includes lands having moderate departure in fire regime health and structural integrity. The interagency, standardized tool for determining FRCC within the field office was used in January of 2004. First, the tool was used to assign one Potential Natural Vegetation Group (PNVG), in other words the desired vegetation, to each acre of wildland vegetation within each FMU. Then, FRCC is determined for each PNVG by comparing historic reference conditions to those conditions that currently exist. The data produced by the tool explains FR distribution for the SLFO and can be viewed as ***Map 3, Appendix A*** and CC distribution for the SLFO is depicted as ***Map 4, Appendix A***. More information on FRCC can be found at http://www.frcc.gov/

FMUs were lumped into similar strategies concerning stabilization or rehabilitation treatments based on range site descriptions and issues that were similar to each polygon within the FMU (A, B, or C). The polygons for units A include: desert component, watershed group, semi-desert loam component, Wasatch Front/urban component, and a wetland unit. Each of the grouped components would be treated similarly for ESR treatments.

Air Quality Concerns
The Clean Air Act Amendments (CAA) of 1990 specify that areas not meeting federal health standards for certain criteria pollutants must develop comprehensive state plans to reduce pollutant concentrations to a safe level. The maximum allowable concentrations (set by the EPA) for these criteria pollutants are known as the National Ambient Air Quality Standards (NAAQS). Areas failing to attain compliance with these standards are considered nonattainment areas. Nonattainment areas are listed by FMU.

Communities at Risk
Population growth and urban development are rapid within the Salt Lake Field Office boundaries. Approximately 86% of the population of Utah resides within this area. Although not all communities at risk from wildfire within these boundaries abut BLM administered lands, the level of complexity in hazard mitigation, community education and public information is high. A complete listing of all communities in the "Communities at Risk" Federal Register Notice of August 17, 2001, is provided for each FMU. Those communities currently targeted for wildfire protection plans are discussed by FMU also. Additional communities that have been identified as at risk by the Northern Utah Fuels Committee, but not listed in the Federal Register are also discussed. There are several communities within the FPU that are on the Federal Register that reside wholly within Forest Service (FS) land and are not considered within this scope of this document. A schedule of hazard assessments and community fire plans to be completed by community is listed in Section IV of this document as Fire Management Components.

Cultural Resources
Thousands of prehistoric and historic cultural resources spanning the last 11,000 years of human occupation are present on BLM administered lands in the SLFO. Prehistoric cultural resources tend to concentrate near water sources and economically valuable food resources. Prehistoric cultural resources include properties as diverse as rock shelters, caves, open camp sites, pit house and wickiup habitation locations, tool production and procurement areas, subsistence gathering locations, rock art, and many other kinds of sites. Historic cultural resources tend to be located, again, near water sources, but are also located near established road and trail networks, arable land, stock grazing areas and near valuable, extractable mineral resources.

Several sites, archaeological and non-archaeological may be identified by Native American groups as Traditional Cultural Properties (TCP). Places that may be of traditional importance to Native American peoples include, but are not limited to, locations associated with the traditional beliefs concerning origin(s), cultural history, or the nature of the world, locations were religious practitioners go, either in the past or the present, to perform, ceremonial activities based on traditional cultural practices, ancestral habitation sites, trails, burial sites, and places from which plants, animals, minerals, and waters were and are collected.

During the last 11,000 years fires has been a common occurrence over much of the landscape. Fire occurrence intervals, in any particular location, can be as low as every 30 years, to greater than 1000 years. Some cultural resource sites have no or little previously exposure to fire and are very sensitive to the effects of fire, particularly late prehistoric wooden structure and historic

mining camps and town sites. Other cultural resource sites have experienced fire numerous times and have more or less reached stasis with fire. However, this concept is complicated by the fact that modern fuel loading is much higher than prehistoric fuel loading, generally, as a result of overgrazing and modern fire suppression. Modern fire suppression and vegetative regime changes have the potential to produce fires that cause damage to cultural resource sites beyond the range of prehistoric conditions.

Historic sites are generally more sensitive to fire, since they often have not yet experienced fire and contain a higher percentage of flammable artifacts. The SLFO has a particularly high concentration of significant historic sites, including the Pony Express/Overland Stage route and associated stations, the Lincoln Highway, Hastings Cuttoff, historic railroads, communication lines, CCC camps, remnants of early homesteading, mining, and water control devices.

Large, hot, uncontrolled fire may threaten prehistoric and historic archaeological remains with abnormally high levels of fire effect. Damage includes scorching, charring, smoke-blackening, oxidation rinds, complete consumption of artifacts, alteration, contamination and destruction of potential dating samples, damage resulting from suppression activities, and extensive post-fire erosion. Cooperative efforts to reduce the possibility of catastrophic crown fire, such as mechanical thinning of small diameter fuels, and reintroduction of relatively cooler and less damaging low-intensity ground fire, can help to minimize wildfire damage and preserve both prehistoric and historic archaeological remains over the long term.

While the overall fire management plan for the SLFO was not predicated upon protection of cultural resources, affording sites this protection is a major focus of the plan. A model has been created, which predicts historic and prehistoric cultural resource sensitivity for each FMU. Cultural resource sensitivity is based on a number of relevant predictors for site location, including slope, vegetation type, landform, proximity to springs and streams, proximity to potential wetlands and historic roads and trail networks. Additionally, known significant site locations were included in determining FMU ranking for cultural resource site sensitivity. At this time cultural resource sensitivity was not calculated for some of the FMU, particularly those along the Wasatch front because of insufficient information. Cultural Resource Sensitivities are listed by FMU in Historic and Prehistoric categories in Table 01 on the following page. This cultural information is depicted as Cultural Resource Sensitivity Historic ***Map 6, Appendix A*** and Cultural Resource Sensitivity Prehistoric ***Map 7, Appendix A***. This model is not meant to replace cultural resource inventories, but rather may be used to direct suppression efforts. When wildfires occur in High or High/Medium FMUs, cultural resources advisors should be considered if available to provide information relevant for determining suppression efforts.

Compliance with Section 106 of the NHPA, and consultation with the State Historic Preservation Office and interested Native American groups, will be completed on a project-specific basis before decisions are made to carry out fire management activities that could affect cultural resources. Individual fire management activities carried out under this plan will be preceded by a complete review of known resources and field survey, as appropriate, to identify cultural resources that might be affected by the proposed activities. Recommendations would be made to protect sites from proposed activities.

Table 01: Cultural Resource Sensitivity by FMU

FMU	Historic Sensitivity	Prehistoric Sensitivity	FMU	Historic Sensitivity	Prehistoric Sensitivity
A01a	Medium/High	Medium	B08a	Medium	Medium
A01b	High	Medium	B08b	Medium	Medium
A02a	Low	Medium	B09a	Unknown	Low/Medium
A02b	Medium/High	High	B06c	Unknown	Low
A03a	Medium	Low	B06d	Medium/High	Low
A03b	Medium/High	Low	B07a	Unknown	Low/Medium
A03c	Medium/High	High	B07b	Unknown	Medium/High
A04	High	Medium	B07c	Medium/High	Low/Medium
A05	Medium/High	Low	B09b	Medium/High	Low/Medium
A06a	Medium/High	Medium	B10a	Medium/High	Low/Medium
A06b	Unknown	Unknown	B10b	Medium/High	Medium
A07	Medium/High	Medium	B11a	Unknown	Low/Medium
A08	Medium/High	Medium	B11b	Unknown	Low/Medium
A09a	Medium/High	Low/Medium	B12a	Unknown	Unknown
A09b	Unknown	Unknown	B12b	Unknown	Unknown
A09c	Medium/High	Low/Medium	B12c	Unknown	Unknown
A10	Medium	Medium/High	B12d	Unknown	Unknown
A11	Medium	Low	B13a	Unknown	High
A12a	Unknown	Medium/High	B13b	Medium	High
A12b	Unknown	Medium/High	B13c	Medium	High
A13	Medium/High	Medium	B13d	Unknown	High
A14	Medium/High	High	B13e	Unknown	High
A15	Medium/High	High	B13f	Unknown	High
A16	Medium/High	Medium	B13g	Medium	High
A17a	Unknown	Medium/High	B13h	High	High
A17b	Medium/High	Low/Medium	B13i	Medium	High
A18a	Medium	Medium/High	B01a	Unknown	Unknown
A18b	Medium	Medium/High	C01	Medium	Medium/High
A18c	Medium	Medium	C02a	Medium/High	Medium
A19	Medium/High	Medium	C02b	Medium	Medium
A20	Medium	Low	C03a	Medium/High	Medium
A21a	Unknown	Unknown	C03b	Medium	Medium/High
A21b	Unknown	Unknown	C04a	Medium/High	Medium
A21c	Unknown	Unknown	C04b	High	Medium
B01	Medium/High	Low/Medium	C04c	High	Medium/High
B02	Medium	Medium	C04d	Medium/High	Medium
B03a	Medium	High	C05	Medium/High	Medium/High
B03b	Medium	High	C06	Medium	Low
B04	Medium/High	High	C07	Medium/High	Low
B05a	Medium	Medium	C08	Medium/High	Low
B05b	Medium/High	Medium	D01a	Medium	Low
B06a	High	Low	D01b	Low/Medium	Low
B06b	Medium/High	Low	D02	Medium	Medium

T&E Species
Federally Listed and Proposed (P,) Endangered (E), Threatened (T) and Candidate (C) species and habitat in Utah are provided by FMU. The most current information has been provided by the USFWS as of May 2004.
[1] Nests in this county of Utah,
[2] Migrates through Utah, no resident populations,
[3] Wintering populations (only five known nesting pairs in Utah),
[4] Critical habitat designated in this county,
[5] Critical habitat proposed in this county,
[6] Historical range,
[7] Experimental nonessential population,
[8] Introduced, refugia population,
[9] Candidate species have no legal protection under the Endangered Species Act. However, these species are under active consideration by the Service for addition to the Federal List of Endangered and Threatened Species and may be proposed or listed during the development of the proposed project, and
[10]Water depletions from *any* portion of the occupied drainage basin are considered to adversely affect or adversely modify the critical habitat of the endangered fish species, and must be evaluated with regard to the criteria described in the pertinent fish recovery programs.

Restoration & Rehabilitation Strategies
Treatment techniques could involve burning, chemical, biological, and/or mechanical. Fire Management Units could be reseeded with a stabilization mixture after a stabilization plan is written. The SLFO greenstrip seed mixture would be used in areas where seed defense perimeters or controls are needed. Seed could be applied by rangeland drill, aerial or ground broadcast, or seedlings could be planted by hand. Protection of rehabilitated units could involve fences, herding, signing, closing of roads, restricting access to public, public education, and use supervision patrolling.

Rehabilitation & Restoration Strategies within the boundary of a Wilderness Study Area (WSA) are described per FMU and will adhere to the guidelines outlined in Handbook H-1742-1.

FMU A01a Elephant Knoll, Callao
FMU A01b West Ibapah

Location Descriptions
A01a is in the southwest corner of Tooele County in the southwest corner of the field office near the Utah Nevada border. It is adjacent to the Utah Test and Training Facility South Area. The south end of the FMU contains a portion of the Deep Creek Wilderness Study Area boundary.

A01b is in Tooele County on the border of Utah and Nevada in the southwest corner of the field office. It includes the town of Ibapah.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres

FMU A01a Elephant Knoll, Callao	186,539	22,667				2,575
FMU A01b West Ibapah	26,300	1,832				5,006

Characteristics
Annual precipitation averages 4 to 9 inches, slopes are generally 0 to 25%, A01a elevation is 4,500-6,000 feetand A01b elevation is 5,000-5,500. Elevation ranges from Ecological sites are mainly Desert Alkali Flat, Desert Salty Silt, Playas, Desert Alkali Bottom, Desert Flat, Desert Salt Flat, Desert Gravelly Loam, Semi-Desert Gravelly Loam and Semi-Desert Shallow Loam.

The dominant vegetation type in this unit is desert shrub characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, gray molly, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, sand dropseed, and cheatgrass. Forbs include globemallow, princess plume, evening primrose, and a variety of annual forbs. Juniper trees are very scattered with heavier concentrations at the upper elevations of this unit and in the area west of Ibapah. Juniper and semi-desert species are more prevalent in upper elevations than in the other portions of the unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. This unit represents the most healthy and diverse desert shrub community in the district and has been less impacted by the invasion of cheatgrass. The Deep Creek Mountains are within this unit and includes riparian species such as carex, sedges, and rushes.

This unit is used heavily by many raptor species including the ferruginous hawk and burrowing owl, both BLM and Utah State sensitive species. Pygmy rabbits were found in this area historically but no recent sightings have been recorded. Several nests occur in the unit in scattered juniper trees and on rock outcrops in the area. Pronghorn also use the range year-round. Some chukar use occurs in the upper elevations of the unit. The kit fox, another species of concern in the district, inhabits this area. Deep Creek provides a ribbon of riparian habitat, which is important to a variety of wildlife species.

Dwarf penstemon (*Penstemon nanus*) and Great Basin Fishhook cactus (*Sclerocactus pubispinus*) are BLM and Utah State sensitive plant species, which occur in this unit. Another species of concern is the sagebrush cholla (*Opuntia pulchella*) which is also endemic to this portion of the Great Basin. The area west of Ibapah contains a few semi-arid herbaceous species that are common to Nevada, but uncommon in Utah.

A portion of the Deep Creeks WSA/Special Recreation Management Area (SRMA) is found on the SE corner of the unit. Non-WSA lands determined to have wilderness characteristics by the BLM are in this unit. Dispersed recreation use occurs in the Deep Creek Mountains with increased use during the summer related to sightseeing, hiking, off-highway vehicle use, and camping. During the fall there is an increase in use during the various hunting seasons.

General dispersed recreation occurs in most of this area, with increased use along the Pony Express/Overland Stage Route which has been designated as a National Historic Trail and BLM National Back Country Byway.

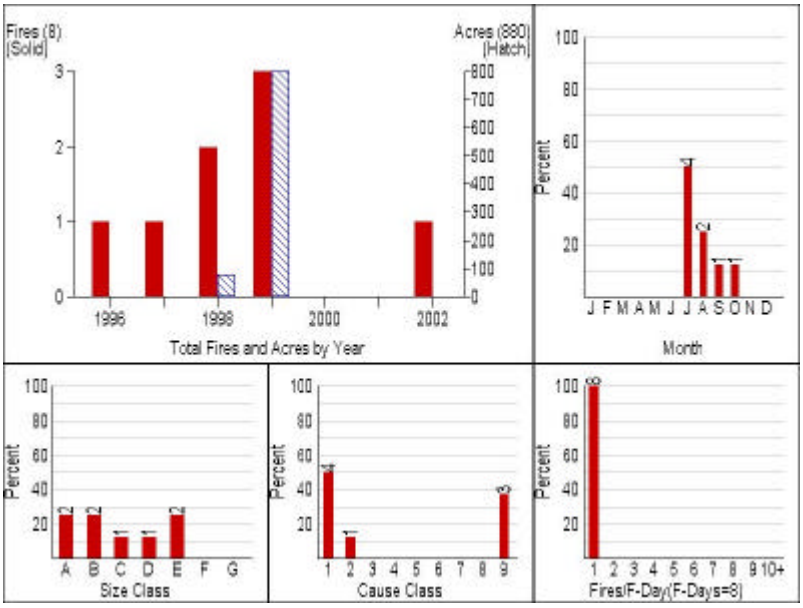
A few mines exist in the unit. The unit is located on the west border of the South Utah Test and Training Range. This area is grazed by sheep and cattle November 1 thru April 30.

Cultural resources in this unit include the Pony Express/Overland Stage Route and associated stations and monuments. Canyon Station, near the mouth of Overland Canyon, is an interpreted Pony Express Station. There are also isolated historic structures on BLM and adjacent private lands. The transition between the mudflats and the benches around the Deep Creek Mountains often contain prehistoric sites.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Isolated ranches with some improvements exist in the FMU, and the FMU also borders the town of Callao.

Fire History



From 1994 to 2003, 8 fires have occurred within the FMU, for a total of 880 acres. Lightning-caused fires account for half of the reported fires. Fires have been reported from June through October. Approximately 25% of fires in this FMU are suppressed at ¼ acre; 50% at 10 acres (or less).

Wildland fire behavior in this vegetation type is best predicted by Fuel Model 2. The primary carrier of fire in this fuel type is an understory of grass and litter where desert shrub is dominant. In some areas, where brush is less dominant and during moist years when grass growth is good, Fuel Model 1 may be a better predictor of wildland fire behavior. Rates of spread in these lighter fuel types are moderate to high depending on burning conditions. Although fire occurrence in this unit is relatively low, the potential exists for large severe fires that could damage the desert shrub vegetation type in this unit.

Fire Regime/Condition Class
FMU A01 contains two PNVG's. The salt desert shrub PNVG occupies 83% of the land within the FMU. This PNVG is fire regime V and condition class 3. The Wyoming big sagebrush PNVG occupies 17% of the land within the FMU. This PNVG is fire regime 3 and condition class 3. Due to the invasion of cheatgrass in the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	82	5	3	1	salt desert shrub	No current target
Wyoming big sagebrush	18	3	3	1	Wyoming big sagebrush	No current target

Values at Risk
The wilderness values within the Deep Creek Mountains WSA are at risk.

A few mines exist in the unit. The unit is located on the west border of the South Utah Test and Training Range.

This area is grazed by sheep and cattle November 1 thru April 30.
Resource values of concern in this unit also include the salt desert shrub, ferriginous hawk, burrowing owl, kit fox, the Deep Creek riparian area, Dwarf penstemon (*Penstemon nanus*), Great Basin Fishhook cactus (*Sclerocactus pubispinus*), sagebrush cholla (*Opuntia pulchella*), rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Isolated ranches and homes exist in the unit and borders Callao. A few rangeland improvements occur in the area. Callao is on the Communities at Risk list published in the Federal Register in August 2001. The Callao Volunteer Fire Department provides suppression assistance to the SLFO. Human-caused fires account for half of all wildland fires in this unit.

Fire Management Objectives
Safely reintroduce fire into the ecosystems to meet desired resource management objectives, utilizing the best science.

- Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
- Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, J) guidelines for lands within the boundaries of the Deep Creek Mountains Wilderness Study Area (WSA).

Wildfire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which would improve the FRCC of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities would generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities would not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments would be located in areas where the treatments would reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances to not impact local wildlife.
- Prescribed fires and mechanical/chemical treatments would be conducted at seasons of the year when impacts to wildlife would be minimized. Treatments would normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments would be timed and designed to minimize impacts to these species during these crucial time periods.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C) guidelines for lands within the boundaries of the Deep Creek Mountains Wilderness Study Area (WSA).

Post Fire Rehabilitation and/or Restoration Objectives

This area represent harsh/dry sites due to alkali soils or dry areas along with the elevation. These areas are very sensitive and are being overtaken by invasive species, such as halogeton or cheatgrass. Loss of the shrub component on these sites due to fire can’t be easily restored. ESR techniques applied here would accomplish two objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, and 2) Rehabilitate the area to a desired range condition creating vegetative diversity with native species. Native seed

species would include components of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Treatment techniques could involve burning, chemical, biological, and/or mechanical. These areas would be reseeded with a stabilization mix under a stabilization plan, designed by resource specialists. The SLFO greenstrip seed mix would be used where firebreaks or controls are needed. Seed would be applied by drilling, aerial, broadcast, and/or hand planting.

Rehabilitation and/or restoration actions within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) will adhere to guidelines outlined in Handbook H-1742-1.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials, local residents would work with local communities to increase protection capabilities through suppression, planning, education, and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 800 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.
- Adhere to the following guidelines for lands within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA), according to the Interim Management Policy for Lands Under Wilderness Review (H-8550-1):
- Minimum impact suppression tactics will be used (refer to the Incident Response Pocket Guide, NFES #1077). This does not preclude the use of power tools, aircraft, and motorized firefighting equipment, but minimum impact techniques should be used in association with all suppression tactics.
- All uses of earth moving equipment within the WSA require authorization.
- Priority for placement of large fire camps should be outside the WSA.

- Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in the WSA before developing the Escaped Fire Situation Analysis.
- Use of motorized vehicles and mechanical equipment during mop-up should be minimized.
- Efforts should be made to rehabilitate any impacts created by suppression activities prior to releasing fire crews and associated equipment following fire containment.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.
- The following guidelines will be implemented on lands within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C).
    - Prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems.
    - Prescribed fire activities in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to nonnative species domination and juniper encroachment.
- The following guidelines will be implemented on lands within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C):
    - Vegetation manipulation in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.
    - No chemical, mechanical, or biological means of treatment will be allowed in the WSA.
    - Hand or aerial seeding is permitted within the WSA to restore natural vegetation. The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.

Post Fire Rehabilitation and/or Restoration Strategies

Rehabilitation and/or restoration actions within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) will adhere to the following guidelines outlined in Handbook H-1742-1:

- Rehabilitation actions in the WSA should be conducted in a manner so as not to impair the area's suitability for preservation as wilderness.

- Impacts from equipment used for seeding must be carefully planned to be the least intrusive necessary to obtain a successful seeding.
- The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.
- Current Instruction Memorandums, WSA Handbook H-8550-1, and the Bureau's local, state, or national wilderness specialists should be consulted prior to implementing ESR treatments in the WSA.
- Exceptions to the use of nonmotorized equipment in the WSA must be fully justifiable based upon an imminent and severe threat to high downstream values.
- Coordination with interested public and wilderness organizations is encouraged early in the ESR planning process.

Community Protection/Community Assistance Strategies
No community fire planning or targets have been identified for this FMU at this time. The majority of the community of Callao lies within Juab County. SLFO may request the development of community fire planning and would assist in the preparation of a fire plan. The Fillmore Field Office (FFO) would take the lead with community fire planning. A risk assessment for Callao was completed by the FFO.

If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities

See the Fire Prevention Plan in ***Appendix B*** for additional plans for fire prevention and education.

FMU A02a Floating Island
FMU A02b Silver Island

Location Description
A02a is comprised of Floating Island Mountain and is located in Tooele County.

A02b is roughly the boundary of Silver Island Mountain. This also includes Crater Island and the Donner Reed Pass. The western edge borders Nevada. The boundary of the FMU follows the Silver Island Mountains National Back Country Byway road. It is located in both Tooele and Box Elder Counties.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A02a Floating Island	2,243					
FMUA02b Silver Island Mountain	100,238	8,886				1,847

Characteristics
Annual precipitation averages 4 to 12 inches, slopes are generally 10 to 75%, A02b elevation is 4,500-7,000 and A02b os 4,500-7,000. Ecological sites are mainly Desert Alkali Flat, Desert Salty Silt, Playas, Desert Olitic Dunes, Desert Alkali Bottom, Desert Flat, Desert Alkali Bench, Desert Salt Flat, Desert Loam, Desert Gravelly Loam, Semi-Desert Gravelly Loam, Semi-Desert Shallow Loam and Upland Gravelly Loam, and Upland Shallow Hardpan.

The dominant vegetation type in the low elevations of this unit is desert shrubs characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, gray molly, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, sand dropseed, and cheatgrass. Forbs include globemallow, princess plume, evening primrose, and a variety of annual forbs. Juniper trees are very scattered with heavier concentrations at the upper elevations of this polygon. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one species. This unit represents a healthy and diverse desert shrub community and has been less impacted by the invasion of cheatgrass. The primary vegetation of the upper elevations of this unit is juniper mixed with mountain mahogany, big sagebrush, black sagebrush, and cliffrose, with an understory of bluebunch wheatgrass, and Salina wildrye.

A small population of pronghorn inhabit the unit. The area has potential for reintroduction of bighorn sheep. Chukar use occurs throughout the unit. Several raptor species also inhabit the unit with most nests being located on ledges and rock outcrops. BLM, Utah, State Sensitive Species include the ferruginous hawk and burrowing owl. The kit fox, also a species of concern, inhabits portions of this unit.

The only BLM, Utah, State Sensitive plant species which occurs in the unit is the Great Basin fishhook cactus (*Sclerocactus pubispinus*). The outlier species Anderson wolfberry (*Lycium andersonii*) is a unique species which occurs in the southern portion of the Silver Island Mountains.

This unit includes non-WSA lands determined to have wilderness character by the BLM and lands that have been proposed for wilderness designation by special interest groups.

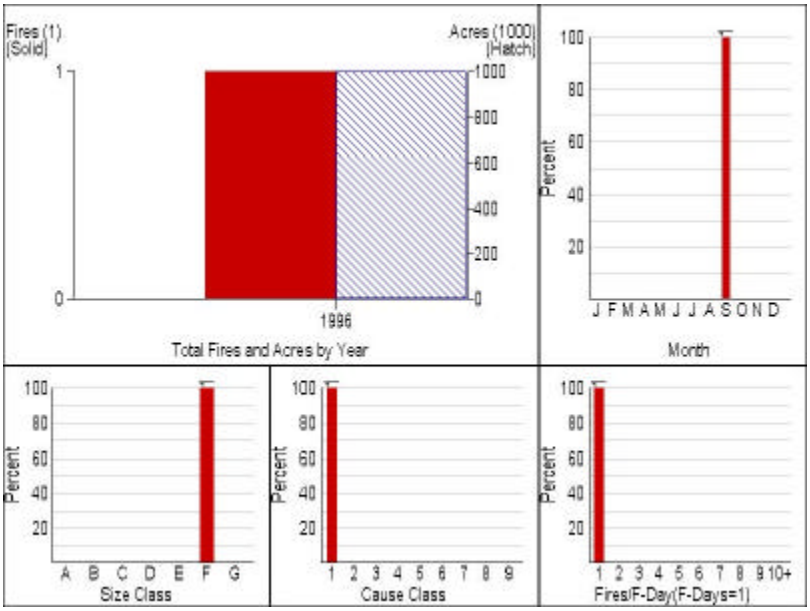
General, dispersed recreation occurs in this area. The unit includes 54 miles of the Silver Island Mountains National Back Country Byway. This area is grazed by cattle from May 10 through March 31, and by sheep in the winter and spring, November 1 through May 10.

The Silver Island Mountains and surrounding areas contain many significant prehistoric sites. Danger Cave on nearby state lands is a World Heritage Site. Historic mining activity is present in the Silver Islands and on Crater Island. The California National Historic Trail's Hastings Cutoff passes through Donner-Reed Pass near the north end of this unit. The area to the south and west of the Silver Island Range contains prehistoric and historic sites, including targets, related to World War II era training at the Wendover Air Base.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

A few range improvements, some structures related to mining, and a Wendover City, Water Treatment Plant in Leppy Pass exist in the FMU. On Wendover Peak there are several communication facilities related to the military and AT&T.

Fire History



Only 1 fire occurred during the 10-year (1994-2003) period. This lightning-caused fire burned approximately 1000 acres in September of 1996 in an area dominated by cheatgrass.
Wildland fire behavior in this unit is best predicted by Fuel Model 2. The primary carrier of fire in this fuel type is an understory of grass and litter where desert shrub is dominant. Rates of spread in the unit are low to moderate, depending on fine fuel loadings. Fire occurrence is low.

Fire Regime/Condition Class

FMU A02 only contains the salt desert shrub PNVG. This PNVG is fire regime V and condition class 3. Due to the invasion of cheatgrass in the FMU, the salt desert shrub PNVG is at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	83	5	3	1	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: pinyon-juniper (5%), sagebrush (11%), grassland (1%).

Values at Risk
Values to be protected in this unit include the salt desert shrub plant community, the ferruginous hawk, the burrowing owl, the kit fox, Great Basin fishhook cactus (*Sclerocactus pubispinus*), Anderson wolfberry (*Lycium andersonii*), rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

This area is grazed by cattle from May 10 through March 31, and by sheep in the winter and spring, November 1 through May 10.

Communities at Risk
There are no Communities at Risk as identified in the Federal Register or areas of human habitation within this unit. However, the southwest portion of this unit borders the city of Wendover. A few range improvements exist in the unit. Other structures in the unit are related to mining activities. There are several communication sites on Wendover peak related to the military and AT&T.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime/condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of

impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.

- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The areas in this unit represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil. 2) The second objective would be to rehabilitate the unit to a condition as close to the desired range condition as feasible in order to create vegetative diversity using native vegetative species including components of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Treatment techniques could involve burning, chemical, biological, and/or mechanical. These areas would be reseeded with a stabilization mixture under the stabilization plan, and a designated mixture designated by resource specialists for the Rehabilitation plan. The green strip seed mixture would be used if fire breaks or controls are needed. Seed would be applied by drilling, aerial, broadcast, and/or hand planting.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in

accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 500 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities will be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs or communities at risk identified, other communities within or adjacent to this FMU would require a hazard assessment and work toward community fire plans.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU A03a Skull Valley A
FMU A03b Skull Valley B & Puddle Valley Areas
FMU A03c Skull Valley C

Location Description

A03a is located at the south end of the Utah Test and Training Facility and along the border of Tooele and Juab counties at the south edge of the SLFO boundary.

A03b stretches from the Tooele Juab County border on the south end to the Utah Test and Training Facility North Area near the Great Salt Lake. It contains a section of I-80 running east to west from the town of Delle to the Knoll I-80 Heliport. The towns of Clive and Aragonite are included in this FMU. The boundary skirts around the base of the Cedar Mountains and and includes a portion of the Cedar Mountain Wilderness Study Area (WSA). The eastern boundary of the FMU is confined mostly by the Stansbury Mountain foothills. The majority of this FMU

is Skull Valley. At the south end of Skull Valley the FMU begins to follow state road 73 to the southwest.

A03c is located on the north side of the Utah Test and Training Range North Area and adjacent to the western shoreline of the Great Salt Lake. It is comprised of State and Privately owned lands. It is located in Box Elder County.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A03a Skull Valley A	14,838	2,038				
FMU A03b Skull Valley B & Puddle Valley Areas	595,558	57,427				57,427
FMU A03c Skull Valley C		6,704				1,071

Characteristics

Annual precipitation averages 4 to 10 inches, slopes are generally 0 to 25%, A03a elevation is 4,500-5,000 A03b is 4,500-7,500, and A03c is 4,000-4,5000. Ecological sites are mainly Desert Alkali Flat, Desert Salty Silt, Playas, Desert Loam, Desert Alkali Bottom, Desert Flat, Desert Salt Flat, Desert Gravelly Loam, Semi-Desert Gravelly Loam, and Semi-Desert Shallow Loam.

The dominant vegetation type in this unit is desert shrubs characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, gray molly, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, sand dropseed, and cheatgrass. Forbs include globemallow, princess plume, evening primrose, and a variety of annual forbs. Juniper trees are very scattered with heavier concentrations at the upper elevations of this polygon. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. This unit has been impacted by large and numerous fires in the past and has many areas dominated by cheatgrass.

West of the Lakeside Mountains, and north of the Riverbed Area in southern Skull Valley, the desert shrub communities are crucial year-round pronghorn range and fawning areas. Additional antelope transplant are planned for late fall 2004. The upper elevations of this unit are mule deer winter range. Portions of this unit have high chukar use. This is a high use area for raptors and this unit has the highest concentration of ferruginous hawk (BLM, Utah, State Sensitive Species) nests within the Salt Lake Field Office. The Skull Valley portion of this unit is used by wintering bald eagles, a threatened species, for foraging and roosting. The kit fox, another species of concern, also inhabits this area.

Pohl's milkvetch (*Astragalus lentiginosus var. pohlii*) is located in the mixed basin big sagebrush/greasewood community in Skull Valley.

Small portions of units A03a and A03b include non-WSA lands determined to have wilderness character by the BLM.

General dispersed recreation occurs in unit A03a and A03c.

Dispersed use occurs throughout unit A03b. In the southern portion of unit A03b, concentrated recreation use occurs from spring through fall along the Pony Express/Overland Stage Route (designated as the Pony Express National Historic Trail and BLM National Back Country Byway) and the campground within the Simpson Springs Special Recreation Management Area (SRMA). A Special Recreation Permit (SRP) has been authorized for Walkabout Therapeutic Expeditions throughout the southern portion of the unit. Walkabout is a wilderness youth treatment program which is authorized to operate year round on public lands. Up to five groups camp and hike throughout the operating area.

In the Skull Valley area in unit A03b, concentrated use occurs in the spring and summer within the Cedar Mountains WSA related to sightseeing, hiking, camping, off-highway vehicle use, and camping. During the fall, use in the Cedar Mountains WSA increases during various hunting seasons. Two areas within the unit, Lone Rock and Horshoe Springs Knoll, are designated as large group camping areas and receive increased organized group camping use in the spring. Horseshoe Springs Watchable Wildlife Area receives wildlife viewing and fishing use. The eastern portion of the Knolls Special Recreation Management Area (SRMA) is found within the unit. Knolls receives dispersed off-highway vehicle use, with increased use in the spring and fall.

Wild horses utilize portions of this unit in the area around the Cedar Mountains.

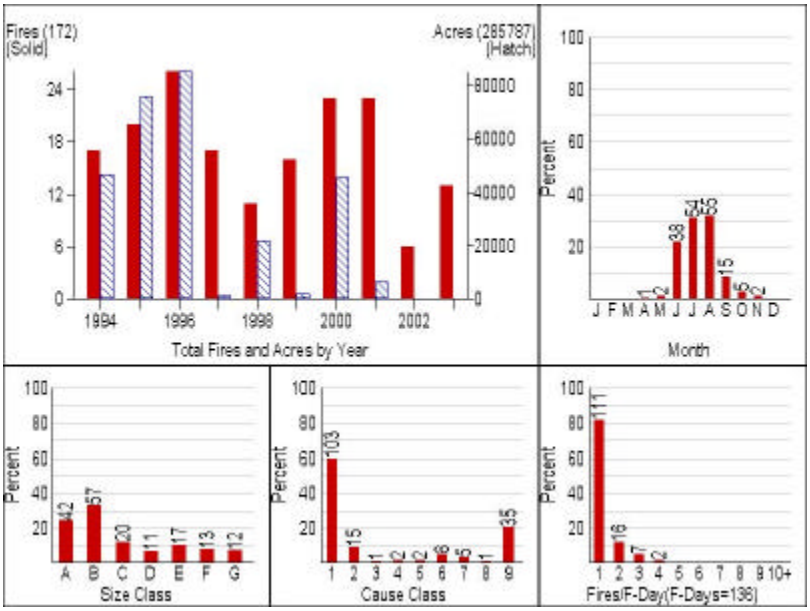
Cultural resource concerns for this unit include Lakeside cave, the California National Historic Trail's Hastings Cutoff, the Lincoln Highway, and the Pony Express/Overland Stage Route. This includes the station sites of Simpson Springs and Old Riverbed, and the Transcontinental Telegraph Station on Government Creek. Historic areas on adjacent private land such as Iosepa are also of concern. Both isolated and concentrated prehistoric sites occur in the unit.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

The Skull Valley Goshute Indian Reservation lies within this FMU. There are several industrial areas within the FMU including: Dugway Proving Grounds, Utah Test and Training Range, Tekoi rocket test facility, U.S. Magnesium plant at Rowley, Marblehead Quarry facilities, two hazardous waste incinerators, and two hazardous waste landfills. Other improvements in this FMU include distribution power lines, a 138 kv power transmission line from Marblehead to the Clean Harbor hazardous waste facilities, a main line of Union Pacific Railroad, U.S. Interstate 80, Simpson Springs Campground, and various ranches and associated improvements.

Fire History

From 1994 to 2003, 172 fires have occurred within the FMU, for a total of 285,787 acres.



Lightning-caused fires account for 60% of the reported fires. Equipment, railroads, and military operations account for most of the human-caused ignitions. Due to the large expansive areas dominated by cheatgrass, the fire season typically begins as soon as the annual grasses cure in early June. However, fires have been reported from April through November. Approximately 25% of fires in this FMU are suppressed at ¼ acre; 58% at 10 acres (or less). Based upon the 10-year average, at least 2 fires will exceed 1000 acres each year; At least 1 fire will exceed 5000 acres annually in this unit. Wildland fire behavior in this vegetation type is best predicted by Fuel Model 1. In some small areas of concentrated desert shrub species Fuel Model 2 may be a better predictor of wildland fire behavior. Rates of spread in these lighter fuel types are moderate to extreme, depending burning conditions. Due to the predominance of lightning and the volatile fuel types, this unit has some of the highest fire occurrence on the Salt Lake Field Office. In addition to lightning, human-caused fires are common as well. The high rates of spread in these fuel types make fires of more than 1,000 acres common, and during extreme burning conditions, fires in excess of 5,000 acres are possible. The district's largest fire occurred in this unit in 1983, and was in excess of 200,000 acres.

Fire Regime/Condition Class

FMU A03 contains two PNVG's. The salt desert shrub PNVG occupies 75% of the land within the FMU. This PNVG is fire regime V and condition class 3. The Wyoming big sagebrush PNVG occupies 25% of the land within the FMU. This PNVG is fire regime III and condition class 3. Due to the extreme invasion of cheatgrass in the FMU, both PNVG's are at an extremely high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed

cheatgrass infested salt desert shrub	77	5	3	1	salt desert shrub	12,500
cheatgrass infested Wyoming big sagebrush	23	3	3	1	Wyoming big sagebrush	3,500

Values at Risk
Values to be protected in this FMU include salt desert shrub, big sagebrush, pronghorn habitat, mule deer winter range, the bald eagle, the ferriginous hawk, the kit fox, Pohl's milkvetch (*Astragalus lentiginosus var. pohlii*), wild horse and burro populations, rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Campground facilities in the Simpson Springs Special Recreation Management Area are at risk. Wilderness values within the Cedar Mountains Wilderness Study Area are at risk.

Cattle winter use occurs in this area from November 1 to May 15, and sheep use occurs November 1 through April 30.

Communities at Risk
In this unit, the communities of Terra, Dugway (English Village), and Skull Valley are on the Communities at Risk list published in August 2001. There are several isolated ranches in this unit, with the predominance of rural/urban development in the community of Terra and on the Skull Valley Goshute Indian Reservation. About 40 % of fires are human-caused.

In addition, several other significant industrial sites exist within, or adjacent to the unit, include: Dugway Proving Grounds, Tekoi rocket test facility, hazardous waste incinerators, and Marblehead Quarry facilities. Other improvements in this unit include pasture and allotment fences, guzzlers, communication sites, power lines, Simpson Springs Campground, and various ranches and associated improvements.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, J) guidelines for lands within the boundaries of the Cedar Mountains Wilderness Study Area (WSA).

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities would generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities would not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments would be located in areas where the treatments would reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments would be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments would normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments would be timed and designed to minimize impacts to these species during these crucial time periods.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C) guidelines for lands within the boundaries of the Cedar Mountains Wilderness Study Area (WSA).

Post Fire Rehabilitation and/or Restoration Objectives

The areas in this unit represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Rehabilitation and/or restoration actions within the boundary of the Cedar Mountains Wilderness Study Area (WSA) will adhere to guidelines outlined in Handbook H-1742-1.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention. Developing community fire plans is a priority in this area.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 500 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 10,000 acres. Once the decadal burn target has been reached at 15,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.
- Adhere to the following guidelines for lands within the boundary of the Cedar Mountains Wilderness Study Area (WSA), according to the Interim Management Policy for Lands Under Wilderness Review (H-8550-1):
- Minimum impact suppression tactics will be used (refer to the Incident Response Pocket Guide, NFES #1077). This does not preclude the use of power tools, aircraft, and motorized firefighting equipment, but minimum impact techniques should be used in association with all suppression tactics.
- All uses of earth moving equipment within the WSA require authorization.
- Priority for placement of large fire camps should be outside the WSA.
- Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in the WSA before developing the Escaped Fire Situation Analysis.
- Use of motorized vehicles and mechanical equipment during mop-up should be minimized.
- Efforts should be made to rehabilitate any impacts created by suppression activities prior to releasing fire crews and associated equipment following fire containment.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A03 by treatment and vegetation type:

Treatment Type	cheatgrass infested Wyoming big sagebrush	cheatgrass infested salt desert shrub
Mechanical	3,400	12,400
Prescribed Fire	100	100
Seeding	3,500	12,500
Chemical		5,000

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping. If used, air quality monitoring may be used to ensure standards are not exceeded.
- The following guidelines will be implemented on lands within the boundary of the Cedar Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C).
    - Prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems.
    - Prescribed fire and vegetation manipulation activities in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.
    - No chemical, mechanical, or biological means of treatment will be allowed in the WSA.
    - Hand or aerial seeding is permitted within the WSA to restore natural vegetation. The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.

Post Fire Rehabilitation and/or Restoration Objectives

The areas in this unit represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating

vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Rehabilitation and/or restoration actions within the boundary of the Cedar Mountains Wilderness Study Area (WSA) will adhere to the following guidelines outlined in Handbook H-1742-1:

- Rehabilitation actions in the WSA should be conducted in a manner so as not to impair the area's suitability for preservation as wilderness.
- Impacts from equipment used for seeding must be carefully planned to be the least intrusive necessary to obtain a successful seeding.
- The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.
- Current Instruction Memorandums, WSA Handbook H-8550-1, and the Bureau's local, state, or national wilderness specialists should be consulted prior to implementing ESR treatments in the WSA.
- Exceptions to the use of nonmotorized equipment in the WSA must be fully justifiable based upon an imminent and severe threat to high downstream values.
- Coordination with interested public and wilderness organizations is encouraged early in the ESR planning process.

Community Protection/Community Assistance Strategies
In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.

For fire education and prevention strategies refer to the Fire Prevention Plan in Appendix B.

Rural fire departments will be encouraged to apply for Rural Fire Assistance grants to improve fire prevention and wildland fire suppression capabilities.

FMU A04 Morrison (Donner) Creek and Bettridge Creek Areas

Location Description
A04 is in Box Elder County along the Utah Nevada border approximately 20 miles north of Wendover, UT. This polygon follows the boundary of the Donner Creek/Bettridge Creek ACEC.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A04 Morrison (Donner) Creek and Bettridge Creek Areas	1,500					695

Characteristics
Annual precipitation averages 12 to 18 inches, slopes are generally 5 to 80%, and elevation is 5,000-7,500. Ecological sites are mainly Mountain Shallow Loam, Mountain Stony Loam, Upland Shallow Loam, Upland Stony Loam, Wetland Fresh Streambank, and Rock Outcrop.

Vegetation in this area consists of trees such as Douglas fir, mountain mahogany, pinyon, juniper, quaking aspen, blue elderberry, and river birch. Shrubs include big sagebrush, black sagebrush, rabbitbrush, and snakeweed. Grasses include bluebunch wheatgrass, bluegrass, and cheatgrass. Desert and semi-desert species occur in the low elevations of the unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This area is included in the Donner/Bettridge Creek ACEC. Each of the streams provide habitat for the threatened Lahontan cutthroat trout. This area is also utilized by mule deer, elk, pronghorn (lower elevations), and Rocky Mountain bighorn sheep. Blue grouse, sage grouse, chukar, and Hungarian partridge also inhabit the area.

This unit includes a small amount of non-WSA lands determined to have wilderness character by the BLM.

General dispersed recreation occurs in this area through most of the year with increased use in the fall related to the various hunting seasons.

This unit includes several recorded prehistoric sites and it is likely that additional prehistoric sites exist within this unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

No major improvements exist in the FMU. There are developed private properties located to the west of this FMU, in Nevada, on the BLM, Elko Field Office. The Doudy Ranch, located just east of the FMU, is the only residence in the area. There is a lodgepole fence exclosure at the lower elevations of Bettridge Creek.

Fire History
No fires were recorded within the last 10-year (1994-2003) period.

Wildland fire behavior within this unit, where there is a Douglas-fir/quaking aspen association, is best predicted by Fuel Model 8. Areas dominated by pinyon/juniper are best predicted with Fuel Model 6. Typically, rates of spread in these fuels are low to moderate with low intensity, although fire may encounter occasional concentrations of heavy and/or dense fuels that can create containment difficulties.

Fire Regime/Condition Class
The vegetation, geography, fire history, and location of FMU A04 and C02 are very similar and have been combined for the purpose of analyzing fire regime condition class. The area within both FMU's contains two PNVG's. The Wyoming big sagebrush PNVG occupies 70% of the land and falls in fire regime III and condition class 2. The juniper-pinyon infrequent fire PNVG

occupies 30% of the land and falls in fire regime I and condition class 2. Due to the invasion of cheatgrass in adjacent FMU's at lower elevations, the Wyoming big sagebrush is at a moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
pinyon-juniper	30	1	2	1	pinyon-juniper	No current target
Wyoming big sagebrush with tree encroachment	61	3	2	1	Wyoming big sagebrush	200

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mountain shrubland (1%), salt desert shrub (8%).

Values at Risk
Values to be protected in this unit include Lahontan cutthroat trout, riparian habitat, riparian exclosure, and sage grouse. Also, this area serves as the watershed for the City of Wendover. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk and no major improvements within the unit. However, protection of adjacent private and state land is a concern. Also, the area serves as the watershed for Wendover, Nevada. There are developed private properties located to the west, in Nevada, on the Elko District. The Doudy Ranch, located just east of the unit, is the only residence in the area. There is a lodgepole fence exclosure at the lower elevations of Bettridge Creek.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible to minimize damage to the Wendover, Utah's municipal watershed and for the threatened Lahontan cutthroat trout habitat.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which would improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities would generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities would not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments would be located in areas where the treatments would reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife would be minimized. Treatments would normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

Watershed Group: These sites represent similar characteristics as the desert component sites, but represent complexes of higher elevation watershed areas that are pretty much surrounded by the desert component. The issues are similar as those of the previous component. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. Other considerations for this group because of the riparian nature are culinary use for local communities (Wendover City, Lake Town, etc.).

ESR techniques applied on these sites would accomplish three main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) Rehabilitate the unit to a desired range condition, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with

funding being supported by the appropriate resource, 3) Protect and restore wetland areas. Restoration would continue after three years with funding being supported by the appropriate resource.

Community Protection/Community Assistance Objectives

- If found to be necessary as a result of a hazard assessment, a fire plan may be initiated with state and county cooperators in conjunction with private property owners.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 30 acres. Once the decadal burn target has been reached at 100 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No prescribed fire targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A04 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment

Mechanical	200
Seeding	200

- These acres were identified in order to reduce the potential for wildfires to destroy the critical vegetation in the riparian zone of Bettridge Creek. This in turn would benefit the Lahontan cutthroat trout population found within Bettridge Creek. These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted with each treatment type.

Community Protection/Community Assistance Strategies
Wendover Fire Department services this area. This department and any other rural fire departments will be encouraged to submit requests for Rural Fire Assistance grants to improve wildland fire prevention and suppression capabilities.

Defensible space and other fire mitigation information may be shared with the Doudy Ranch to help them take action to protect ranch property. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

For general fire prevention and education strategies, see the Fire Prevention Plan in Appendix B.

FMU A05 Lucin to Red Dome Area

Location Description
A05 is in Box Elder Co. and includes the town of Grouse Creek Junction along state road 30. The towns of Matlin and Pigeon are also located in this area as well as a major section of the Central Pacific Railroad Grade ACEC that runs northwest to southwest. The polygon creeps east around the south side foothills of the Hogup Mountains to meet the shoreline of the Great Salt Lake.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A05 Lucin to Red Dome Area	214,703	47,471				214,703

Characteristics
Annual precipitation averages 5 to 9 inches, slopes are generally 0 to 25%, and elevation is 4,500-5,000. Major ecological sites are Alkali Bottom, Alkali Flat, Desert Alkali Bench, Desert Loam, Desert Oalitic Dunes, Desert Flat, Mud Flat, Bare, Semi-Desert Shallow Loam, Semi-Desert Shallow Hardpan, Semi-Desert Loam and Wet Saline Meadow.

The dominant vegetation type in this unit is desert shrubs characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, gray molly, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, needle-and-thread grass, squirreltail, and cheatgrass. Forbs include

globemallow, princess plume, evening primrose, and a variety of annual forbs. Juniper trees are very scattered within this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Mule deer utilize portions of this unit in severe winters. This area is year round habitat for pronghorn. There is high chukar use in the rocky hills of the unit. Ferruginous and Swainson's hawks, and the burrowing owl, all BLM, Utah, State Sensitive Species, are common nesters in this unit along with other raptors. The threatened bald eagle makes significant use of this area in the winter, with Owl Springs area providing several important roost sites. The kit fox is a species of concern that inhabits this area. The area in and around the abandoned community of Lucin provides habitat for numerous species of passerine birds as well as the Least chub, a BLMand Utah State sensitive species.

This unit includes non-WSA lands determined to have wilderness character by the BLM.

General dispersed recreation occurs in most of this unit with higher recreation use along the Central Pacific Railroad Grade, which is designated as the Transcontinental Railroad National Back Country Byway. Portions of the Pilot Range within the unit receive increased use during the various hunting seasons in the fall.

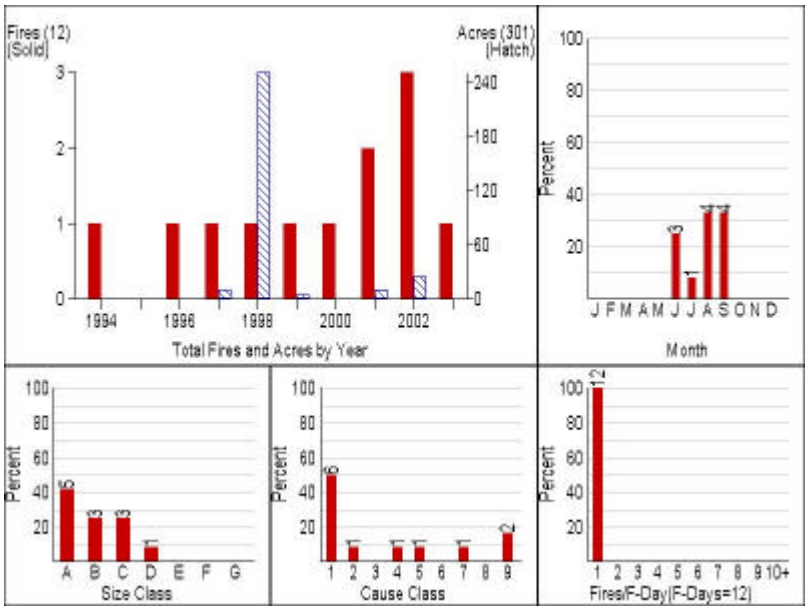
This unit is grazed almost year round by cattle (May 16-April 30), by sheep (November 1 through April 27, and by horses (November 1 through April 30).

Cultural resources in this unit include the Central Pacific Transcontinental Railroad Grade (ACEC) and associated sites and clusters of prehistoric sites near springs. The Bidwell-Bartleson Trail passes through a portion of this unit. Protection concerns include the wood trestles and culverts, sidings, and stations along the railroad grade.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

There are a few isolated ranches within the FMU, State Highway 30, a main line of Union Pacific Railroad and structures related to the railroad. Regeneration stations associated with the fiber optics line also exist across the FMU.

Fire History



During the previous 10 years (1994-2003), 12 fires were reported in this FMU for a total of about 300 acres. The Grouse Valley fire in 1998 accounted for 250 of those acres. Half of the fires were lightning-caused from June through September. Since this area is dominated by desert shrubs and scattered juniper, fire is typically spread through an understory of grass and annual forbs. Wildland fire behavior within this unit is best predicted by Fuel Model 2. Rates of spread in these fuels are moderate. Fire occurrence in this unit is low.

Fire Regime/Condition Class

FMU A05 only contains the salt desert shrub PNVG. This PNVG is fire regime V and condition class 3. Due to the invasion of cheatgrass in the FMU, the salt desert shrub PNVG is at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	93	5	3	1	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: grassland (6%), sage (1%).

Values at Risk

Values to be protected in this unit include desert shrub, habitat for the pronghorn, Ferruginous hawk, Swainson's hawk, the burrowing owl, the kit fox, the Least chub, and winter habitat for the bald eagle and mule deer, and rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk

There are no Communities at Risk as yet identified in the Federal Register or by the Northern Utah Fuels Committee. However, the area borders unit B04 where communities have been identified as at risk. There are a few isolated ranches within the unit. The Rabbit Springs BLM Field Camp is within this unit. A few range improvement projects exist in the unit such as guzzlers, troughs, pipelines, and fencing, as well as structures related to the railroad. Regeneration stations associated with the fiber optics line exist across the unit.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible, and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Community Protection/Community Assistance

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention. If further community development were to take place, a hazard assessment would be completed and community fire planning initiated with state and county cooperators in conjunction with any private property owners.
- Work with rural fire departments to improve suppression and prevention capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 500 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Post Fire Rehabilitation and/or Restoration Objectives

The areas in this unit represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of

topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Community Protection/Community Assistance Strategies
In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.

For fire, prevention and education strategies refer to the Fire Prevention Plan in Appendix B.

Rural volunteer fire departments would be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU A06a Bear River Drainage east
FMU A06b Bear River Drainage west

Location Description
A06a is in Rich County and includes the towns of Woodruff, Randolph and Sage Creek Junction. The polygon consists mostly of agricultural lands and runs north south, roughly following state road 16.

A06b is located north of the Great Salt Lake and is divided into halves by Cache and Box Elder counties. The city of Tremonton is located nearly at the heart of the FMU. This polygon consists of state and private lands.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A06a Bear River Drainage east	423	241				67,851
FMU A06b Bear River Drainage west	419	3,458	14			27,0770

Characteristics
Annual precipitation averages 7 to 9 inches, slopes are generally 5 to 30%, A06a elevation is 6,500, and A06b is 5,000-6,000 feet. Major ecological sites are Desert and Semi-Desert Shallow Loam, Gravelly Loam, Alkali Bench, Loam, Alkali Loam, Wet Saline Streambank, Semi-Wet Fresh Meadow, and Wet Fresh Streambank.

The primary vegetation type in this unit is native meadow grasses, carex, sedges, rushes, willow, bulrush, cattails, and river hawthorne along the Bear River riparian corridor. The upland sites within the unit are dominated by big sagebrush, black sagebrush, rabbitbrush, snakeweed, and agricultural areas. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

The unit provides year round habitat for mule deer, as well as, elk and occasionally moose. In the Cache and Box Elder portions, the area is also important for the ring-necked pheasant and quail.

The Bear River and associated riparian area is important as habitat for waterfowl and shorebirds as well as an important fishery. BLM, Utah, State Sensitive Species include the white-faced ibis, long-billed curlew, snowy plover and white pelican.

Most of the private lands along the river are grazed by cattle, sheep and horses throughout most of the year.

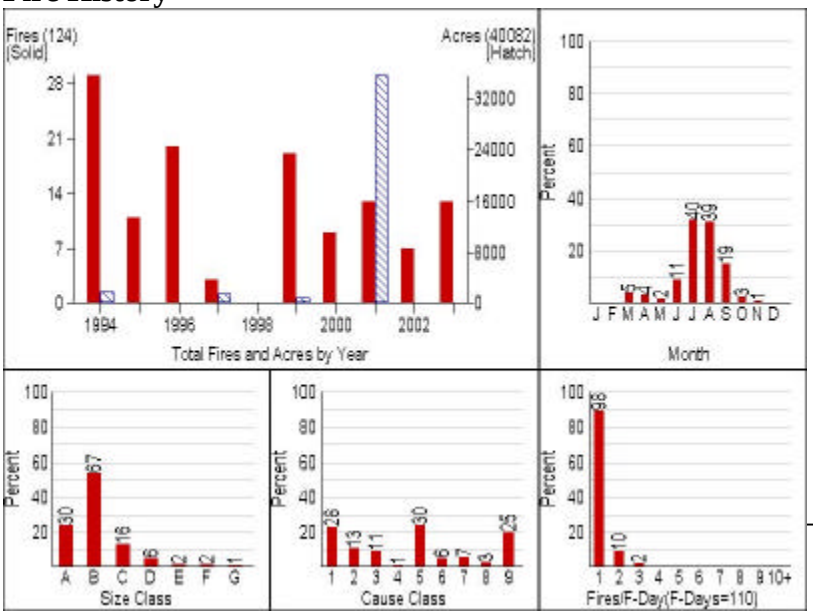
Recreation in this unit is mostly related to fishing and waterfowl hunting as well as canoeing. Concentrated use occurs within the Little Creek Campground located to the east of the Little Creek Reservoir adjacent to unit A06a.

BLM records indicate no previously recorded sites in this unit. Generally, existing cultural resource records show few prehistoric sites recorded in this unit. The exception is near the mouth of the Bear River , where a number of significant sites are known. This includes the Lower Bear River Archaeological District, which is listed on the National Register of Historic Places. Numerous historic resources are also known to occur in the developed portions of this unit.

This FMU in Rich County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Black-footed Ferret[6] (*Mustela nigripe*) E, and the Canada Lynx (*Lynx Canadensis*) T.

Developments in this FMU include homes, ranches, and associated improvements. Within the FMU there are several towns and small cities that have associated small industrial developments. U.S. Interstate 15 and 84 cross a portion of the FMU. In the Bear River drainage east portion of the FMU there are 2, 345 kv power transmission lines, a sour gas pipeline with an associated gather system, and a 20 inch natural gas pipeline from Wyoming to Hyrum, Utah.

Fire History



Based upon the 10-year (1994-2003) statistics, 124 fires were reported in the Bear River Drainage totaling over 40,000 acres. The Fort Ranch fire (July 2001) was the largest at 35,600 acres. Fires were reported from March through November; most fires (64%) were reported in July and August. The noteworthy statistic for this FMU is the large proportion of human-caused fires. Over 75%

of the reported fires were human-caused; specifically, almost ¼ were caused by debris burning. Fire occurrence in this unit is relatively low. Meadow grasses and Riparian vegetation within the unit would best fit Fuel Model 3 where the grasses and sedges typically exceed 2½ feet. Cultivated grains can be considered similar to the marshland grasses. Potentially, under the influence of wind, fire intensity increases and may spread across wetlands where fuel continuity and moisture conditions are favorable. Where average grass height is less than 2½ feet, Fuel Model 1 would best predict fire behavior.

Fire Regime/Condition Class
Fire regime and condition class was not developed for this FMU because the unit is dominated by agricultural and commercial/residential developments. The burnable wildland vegetation only comprised an extremely small percentage (less than 1%) of the entire FMU and did not match the criteria needed to make an accurate assessment of fire regime and condition class.

Values at Risk
Critical values to be protected include the Bear River, the associated riparian area and fisheries, the white-faced ibis, long-billed curlew, snowy plover, and white pelican. Other values to be protected include habitat for mule deer, elk moose, the ring-necked pheasant, and quail and rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk. Facilities within the Little Creek Campground in unit A06a are at risk.

Communities at Risk
Several small communities have been published in the Federal Register as Communities at Risk: Woodruff, Deweyville, and Home Ranch. Randolph, Mountain Fuel, Beaver Dam, Clarkston have been identified as communities at risk by the Northern Utah Fuels Committee. Developments include homes, ranches, and associated improvements. There is a high occurrence of human-caused fires in this unit (over ¾ of the total).

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable

species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.

- Desire to implement fuels treatments which will improve reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

This area consists of an area of Upland sites of Salt Desert Shrubs, native meadow grasses in the riparian drainage bottoms, with special wetland species of carex, rushes, and sedges occurring in the area. Invasive weed species invade the area where there are fires, or disturbance. Cheatgrass invades the upland sites, while Fragmities, Purple loosestrife , cord grass, and others invade the lower sites.

At issue at this site is: T&E wildlife species, such as the long-billed curlew, white faced ibis, snowy plover and white pelican; loss of habitat for wildlife and desirable vegetative species, wildlife animals such as mule deer, elk, moose, ring-necked pheasant, and quail are common on this site. Along the Bear River, there are important fisheries that are also at issue. Socio-economics is an important issue due to several small communities occurring within the area.

Objectives for this site are: (1) Prevent the loss of soil from erosion especially in drainages and flow patterns, (2) Prevent the loss of native species composition as defined by the ecological range site description, (3) Protect riparian areas for livestock and wildlife, prevent the loss of wildlife habitat, as well as, habitat protection for sensitive species, (4) Control the spread of invasive/noxious weeds in the area.

Treatment techniques for the area involve mechanical, prescribed burning, biological control. Drill seeding would work on the upland areas using the ESR stabilization seed mix. Use of chemical control would be limited due to the proximity of water along the riparian areas. Chemicals would need to be at least 25 feet from any riparian source when spraying by hand 100 feet from any water source using ground sprayers, and 250 feet from any water source if aerial applications are done. Any chemical application around water sources would need to be approved on the state agricultural approval list.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention. Encouraging public participation in the community fire planning is a priority in this area.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 300acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Restoration and Rehabilitation

This area consists of an area of Upland sites of Salt Desert Shrubs, native meadow grasses in the riparian drainage bottoms, with special wetland species of carex, rushes, and sedges occurring in the area. Invasive weed species invade the area where there are fires, or disturbance. Cheatgrass invades the upland sites, while fragmities, purple loosestrife, cord grass, and others invade the lower sites.

1) Prevent the loss of soil from erosion especially in drainages and flow patterns, 2) Prevent the loss of native species composition as defined by the ecological range site description, 3) Protect riparian areas for livestock and wildlife, prevent the loss of wildlife habitat as well as habitat protection for sensitive species, control the spread of invasive/noxious weeds in the area.

Treatment techniques for the area involve mechanical, prescribed burning, biological control. Drill seeding would work on the upland areas using the ESR stabilization seed mixture. Use of chemical control would be limited due to the proximity of water along the riparian areas. Chemicals would need to be at least 25 feet from any riparian source when spraying by hand, 100 feet from any water source using ground sprayers, and 250 feet from any water source if aerial applications are done. Any chemical application around water sources would need to be approved on the state agricultural approval list.

Community Protection/Community Assistance Strategies
Hazard assessments, community fire plans, and mitigation activities will be completed in cooperation with the state officials, county officials, and local residents for Woodruff. If additional community development occurs or communities at risk identified, other communities within this FMU would require a hazard assessment and work toward community fire plans.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education objectives and strategies. In the other communities and scattered ranches within the unit, fire mitigation information may be shared to motivate citizens, independently or as communities, to implement hazard reduction projects and prevention activities.

Rural volunteer fire departments throughout the unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities within the respective departments.

FMU A07 Newfoundland Mountains Bench Area

Location Description
A07 forms a horseshoe shape, or upside down U shape around Newfoundland Mountains. It is in Box Elder County approximately 2 miles north of I-80 and borders the Utah training and test range on the FMU's southern end.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A07 Newfoundland Mountains Bench Area	22,762	2,590				3,661

Characteristics
Annual precipitation averages 5 to 7 inches, slopes are generally 1 to 20%, and elevation is 4,460-4,500 feet above sea level. Ecological sites are mainly Desert Alkali Flat, Desert Salty Silt, Playas, Desert Alkali Bottom, Desert Flat, Desert Salt Flat, Desert Sandy Loam, Desert

Oolitic Dunes, Desert Gravelly Loam, Semi-Desert Gravelly Loam, Semi-Desert Stony Loam, and Semi-Desert Shallow Loam.

The dominant vegetation type in this unit is desert shrubs characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, gray molly, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, and cheatgrass. Forbs include globemallow, princess plume, evening primrose, and a variety of annual forbs. Juniper trees are very scattered in the upper elevations of this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. This unit represents a healthy and diverse desert shrub community and has been less impacted by the invasion of cheatgrass.

Bighorn sheep were introduced here in early 2001. The bighorn sheep are expected to utilize the upper elevations of the range (C-8) much more than this unit, where use will be light. The area is also inhabited by chukar. The ferruginous hawk and burrowing owl, both BLM, Utah, State Sensitive Species, are found in this unit along with other raptors. Juniper trees in this area are used by raptors for nesting. The kit fox, another species of concern, also inhabits this unit.

This unit includes non-WSA lands determined to have wilderness character by the BLM and lands that have been proposed for wilderness designation by special interest groups.

Dispersed recreation occurs in this area.

Historic mining structures are located in the north portion of the unit. Relatively few sites have been reported from this unit. However, significant prehistoric sites are known from adjacent lands and are likely to occur within this unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

No significant improvements exist in the FMU other than the historical structures related to past mining activities.

Fire History
No fires were recorded within the last 10-year (1994-2003) period.

Wildland fire behavior within this unit is best predicted by Fuel Model 2. Rates of spread in these fuels are moderate. Fire occurrence in this unit is low.

Fire Regime/Condition Class

FMU A07 only contains the salt desert shrub PNVG. This PNVG is fire regime V and condition class 3. Due to the invasion of cheatgrass in the FMU, the salt desert shrub PNVG is at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	98	5	3	1	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: grassland (1%).

Values at Risk
Primary values to be protected include the desert shrub plant community, bighorn sheep habitat, ferruginous hawk, burrowing owl, juniper trees that are used by raptors for nesting, and kit fox habitat. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are currently no Communities at Risk as identified in the Federal Register or by the Northern Utah Fuels Committee in this area. No significant improvements exist in the unit other than the historical structures related to past mining activities.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The areas in this unit represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Community Protection/Community Assistance Objectives

- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL)

precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90 % of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 300 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for general wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU A08 North Oquirrh Mountain Area

Location Description

A08 runs north south from the southern shoreline of the Great Salt Lake. It stops short of the junction of Tooele, Salt Lake, and Utah counties. Its eastern edge is defined by the eastern edge of Tooele County as it sits adjacent to Salt Lake County along the ridgeline of the Oquirrh Mountains.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A08 North Oquirrh Mountain Area	14,449	1,540				12,068

Characteristics

Annual precipitation averages 10 to 25 inches, slopes are generally 5 to 80%, and elevation is 5,000-8,000 feet above sea level. Ecological sites are generally Semi-Desert Shallow Loam, Semi-Desert Loam, Semi-Desert Gravelly Loam, Upland Shallow Hardpan, Upland Shallow Loam, Upland Loam, Upland Stony Loam, Mountain Loam, Mountain Shallow Loam, Mountain

Gravelly Loam, High Mountain Loam, High Mountain Stony Loam, Subalpine Meadow, and Conifer Woodland.

The North Mountain Area, which resides above 5,600 feet, is a nonnattainment area.

This unit has a variety of vegetation types. Lower elevation benches and valley bottoms are dominated by annual grasses mixed with noxious weeds in some areas. Scattered stands of big sagebrush with perennial grass understory occur in this mixed annual type. Mid to upper slope vegetation includes mountain mahogany, maple, quaking aspen, snowberry, gambel oak, mountain laurel, big sagebrush, Douglas fir, subalpine fir, bluebunch wheatgrass, and mountain brome. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Portions of these lands may have special characteristics. This unit provides crucial deer and elk winter and summer range. The lower canyon bottoms are important deer fawning areas. Blue Grouse and chukar also inhabit the area.

Unique stands of the hybrid oak species (*Quercus gambelii turbinella)* exist between the 5,000 and 7,000 foot elevation in the southern portion of the unit. This is a hybrid oak cross between gambel oak (*Quercus gambellii*) and turban oak (*Quercus turbinella*). Small stands of the hybrid oak species occur in the lower ridges of the southwest portion of the unit.

This unit includes non-WSA lands determined to have wilderness character by the BLM.

General, dispersed recreation occurs in this area through most of the year with increased use in the fall during the various hunting seasons. Recreation use includes mainly non-motorized activities such as hiking and equestrian use, as the majority of public lands in the North Oquirrhs are closed to motorized use.

Livestock grazing occurs on portions of this unit between May 15 and October 15.

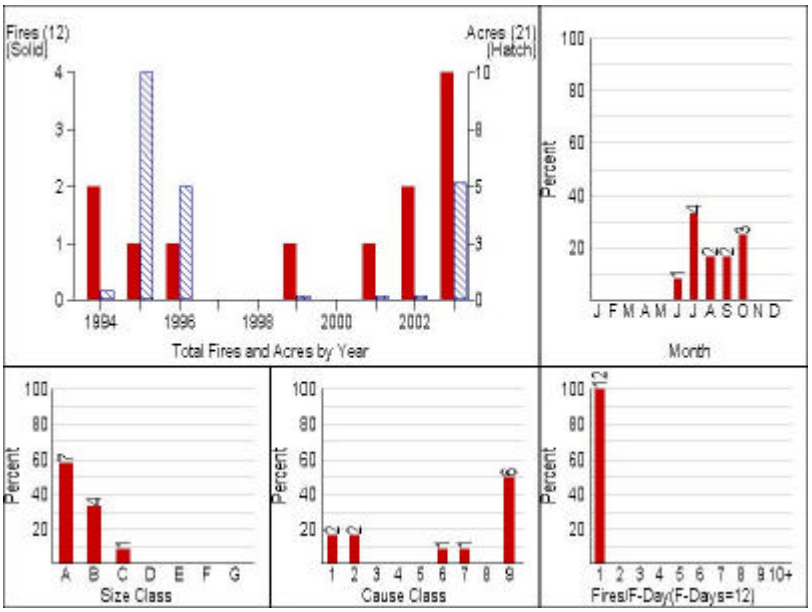
Only a few small inventories have been conducted in this unit. Cultural resources on adjacent private lands include prehistoric lithic scatters, historic sites, and rock art. Similar resources are expected on BLM administered lands in the area.

This FMU in Salt Lake County has the potential to contain Slender Moonwort (*Botrychium lineare*) C, Ute Ladies'-tresses (*Spiranthes diluvialis*) T, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[1,3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*) T.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

There is a high concentration of urban development occurring on adjacent private properties to the west of this FMU and the associated small industry and commercial growth. Kennecott Copper has a portal to there underground operations which is associated with the old International Mine and smelter operations which is now a super fund area. There are a number of significant communication areas for High Definition Television, Television, radio, and commercial businesses along the top of the Oquirrh Mountains on the eastern edge of the FMU they include facilities on: Farnesworth Peak, South Farnesworth Peak, Kessler Peak, North Kessler Peak, and Nelson Peak. A main line for Union Pacific Railroad and associated facilities, U.S. Interstate 80, 2 natural gas transmission lines, and 2 power transmission lines (a 230 kv and a 69 kv).

Fire History



Only 12 fires were reported for about 21 acres from 1994 through 2003. Most of these fires were human-caused (10 out of 12). Fires were reported from June through October with no month(s) having significantly more ignitions than another.

Wildland fire behavior in this vegetation type is best predicted by Fuel Model 1 on the lower benches where annual grasses dominate. In the scattered areas where big sagebrush is more dominant, Fuel Model 6 may be a better predictor of wildland fire behavior. In higher elevations where there is a snowberry/quaking aspen/maple association, fire behavior is best predicted by Fuel Model 5. North facing slopes, where there is a dominance of Douglas fir, would be in Fuel Model 8. Rates of spread in these fuels are low to moderate. Fire occurrence in this unit is moderate.

Fire Regime/Condition Class

FMU A08 contains three PNVG's. The mountain shrubland PNVG occupies 59% of the land within the FMU and is fire regime II and condition class 3. The juniper-pinion infrequent fire PNVG occupies 21% of the land within the FMU and is fire regime I and condition class 2. The interior Rocky Mountain Douglas fir PNVG occupies 20% of the FMU and is fire regime III and condition class 2. Due to the invasion of cheatgrass in adjacent FMU's at lower elevations, the mountain shrubs are at high risk of loss. The juniper-pinion and Douglas fir PNVG's are at moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
mountain shrubland	60	2	3	2	mountain shrubland	No current target
Douglas fir	19	3	2	2	Douglas fir	No current target
pinyon-juniper	14	1	2	2	pinyon-juniper	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: riparian (5%), grassland (2%).

Values at Risk

Primary values to be protected include the hybrid oak species (*Quercus gambelii turbinella),* watersheds, deer fawning areas, crucial deer and elk winter and summer range and cattle rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk

There is a high concentration of urban development occurring on adjacent private properties to the west of this unit and rapid growth within the unit. There are a number of significant communication sites along the top of the Oquirrh Mountains on the eastern edge of the unit. The North Oquirrhs are a significant watershed for communities within Tooele Valley. Lakepoint and Pine Canyon are on the Communities at Risk list published in the Federal Register in August 2001, while Erda has been recognized as at risk by the Northern Utah Fuels Committee. Communities may be identified as at risk within or adjacent to the unit as hazard assessments are completed and growth continues. Human-caused ignitions account for almost all fires in this unit.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype and the unique stands of the hybrid oak species (*Quercus gambelii turbinella)* to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments would be conducted during seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper sites, they receive a little more moisture than the desert component, ranging from 8 to 12 inches of annual rainfall. Loss of shrub species due to fire, invasive plants, especially cheatgrass are a threat. Knapweed also invades these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component. Loss soil from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. Loss of wildlife habitat is a major concern in these sites. Due to the close proximity of these components to the major population, recreation uses are also common.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation techniques that historically been successful in this

component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.Encouraging public participation in the community fire planning is a priority in this area.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 300acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Restoration and Rehabilitation

These sites represent the areas of salt shrub, sagebrush/grass, juniper, and subalpine tundra. They receive a little more moisture than the desert component. 1) Prevent the Loss of shrub species due to fire, invasive plants, especially cheatgrass, 2) Prevent, control, and attempt to eradicate noxious weed species and invader species, such as knapweed and dyers woad. These species invade these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component, #) Prevention of soil loss from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes, 4) Stabilize drainages and gullies on burned sites. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. 5)Enhance and aid in restoration of wildlife habitat, 6) Control recreation and protect use areas. Due to the close proximity of these components to the major population, recreation uses are also common.

Community Protection/Community Assistance Strategies
Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for fire education and prevention strategies.

The local volunteer fire departments that respond to fires within this unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities within the respective departments.

FMU A09a North Rush Valley
FMU A09b Cedar Valley Areas
FMU A09c Tooele Valley

Location Description
A09a surrounds the town of Clover located in Tooele County along state road 199. It is directly northeast of the Tooele Army Depot South Area.

A09b consists mostly of private ground with little elevation change. Located in Utah County on the west side of Utah Lake between the Oquirrh and Lake Mountains. The towns of Goshen, Elberta, Cedar Fort, and Fairfield are located within this polygon.

A09c contains the majority of Tooele valley private ground. The FMU borders Tooele Army Depot North Area at its south end. Tooele, Grantsville, and Erda are relatively densely populated areas and are all included within this polygon's area. Located just south of the Great Salt Lake in Tooele County.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A09a North Rush Valley	31	191				10,544
FMU A09b	13,322	19,687	112			14,9643

Cedar Valley Areas						
FMU A09c Tooele Valley	3,745	3,250				65,043

Characteristics
Annual precipitation averages 8 to 12 inches, slopes are generally 0 to 10%, A09a elevation is 5,410-5,500 A09b is 5,000, and A09c is 4,500-5,000 feet. Major ecological sites includes Desert Shallow Loam, Desert Loam, Desert Clay Loam, Desert Gravelly Loam, Desert Silt Flat, Semi-Desert Loam, Semi-Desert Alkali Loam, Semi-Desert Shallow Hardpan, Semi-Desert Stony Loam, Semi-Desert Sandy Loam, Semi-Desert Sand, and Upland Stony Loam.

The majority of this unit has been impacted by agricultural uses which have converted these lands from desert and semi-desert vegetation types to monotypic stands of alfalfa, winter wheat and other cultivated species. Where natural vegetation occurs, the areas consist of desert shrubs characterized by greasewood, rabbitbrush, snakeweed, black sagebrush, and big sagebrush. Grasses consist of Indian ricegrass, squirreltail, sand dropseed, and cheatgrass. A variety of annual forbs are found in the unit. Juniper trees are very scattered with heavier concentrations at the upper elevations of this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

These areas have been highly impacted by human use, which has in turn impacted the density and diversity of wildlife species within the unit. This unit provides important winter range for the resident elk herd. Mule deer are found in the unit, with highest numbers during the winter and pronghorn utilize portions of the unit year round. The ring-necked pheasant is an important game bird in this area. The unit also provides important habitat for several raptor species including the ferruginous and Swainson's hawks, and burrowing owl, all BLM, Utah State Sensitive Species. The Cedar Valley and north Rush Valley areas provide important foraging and roosting habitat for the threatened bald eagle. The kit fox, also a species of concern, inhabits this unit.

Unit A09c includes a small amount of non-WSA lands determined to have wilderness character by the BLM.

General dispersed recreation occurs in this area, with increased use along the Pony Express/Overland Stage Route which has been designated as a National Trail and BLM National Back Country Byway.

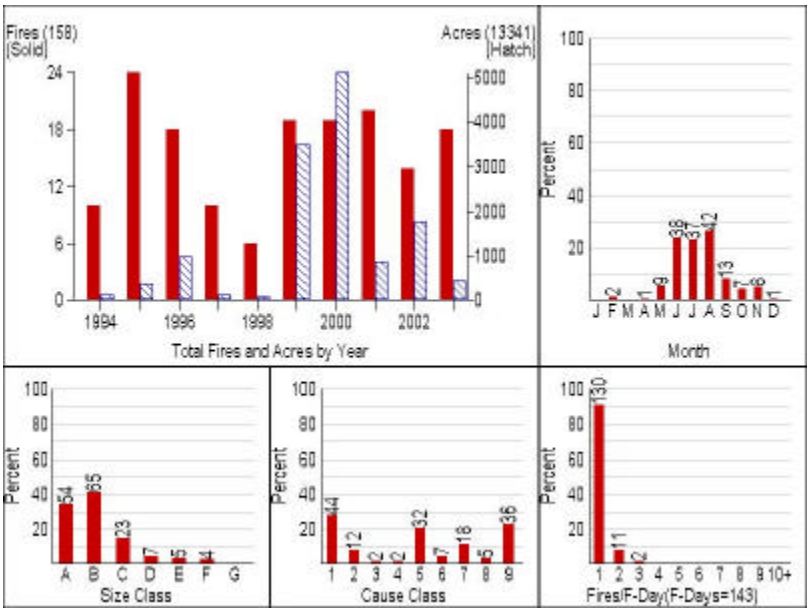
Cultural resource concerns within the Tooele Valley portion of this unit include clusters of prehistoric sites near Grantsville and historic structures on adjacent private lands. Cultural resource concerns within the Cedar Valley portion of this unit include the Pony Express Trail and prehistoric sites. Historic sites and structures such as Camp Floyd and Stage Coach Inn are also present.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

Residential, small industry, and commercial developments are rapidly expanding in this FMU. Scattered ranches also exist in the FMU. The North area of the Tooele Army Depot is adjacent the Tooele Valley portion of this FMU. The 2 Kern River natural gas transmission pipelines and a Questar 20" natural gas transmission pipeline cross portions of this FMU as well as 2 power transmission lines (a 345kv and a 138 kv).

Fire History



On the average, about 16 fires (1,334 acres) can be expected annually from May through November. Nearly ¾ are human-caused, primarily from debris burning, equipment use, and arson. The largest fire recording during the 10-year period (1994-2003) was ignited by the railroad in July 2000 and consumed over 3900 acres near the community of Lakepoint north of Tooele.
Wildland fire behavior on BLM lands within this unit is best predicted by Fuel Model 2 where desert shrubs dominate. However, in some areas where brush is less dominant and grass is more abundant, Fuel Model 1 may be a better predictor of wildland fire behavior. Rates of spread in these fuels are moderate. Fire occurrence in this unit is moderate. Both lightning and human-caused fires are common.

Fire Regime/Condition Class

FMU A09 contains two PNVG's. The salt desert shrub PNVG occupies 55% of the land within the FMU and is fire regime IV and condition class 3. The Wyoming big sagebrush PNVG occupies 45% of the land within the FMU and is fire regime 3 and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	25	5	3	1	salt desert shrub	No current target
Wyoming big sagebrush with tree encroachment	75	3	3	1	Wyoming big sagebrush	700

Values at Risk

Important values to be protected in this unit include elk and mule deer winter range, and habitat for the pronghorn, ring-necked pheasant, ferruginous and Swainson's hawks, burrowing owl, bald eagle, and kit fox. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk

The unit includes the communities of Tooele, Grantsville, Stockton, Rush Valley, Lakepoint, Erda, and Pine Canyon in the North Rush Valley and Tooele Valley areas, as well as commercial businesses in these same areas. Residential and commercial developments are rapidly expanding there. The Cedar Valley area includes the towns of Cedar Fort, Fairfield, and Eagle Mountain. This portion of the unit is more open and less developed than the Tooele area, but has also had a rapid increase in residential and commercial development. Eagle Mountain extends into FMU A12 also. Scattered ranches also occur in this unit. Tooele, Lakepoint, Pine Canyon, Rush Valley, Stockton, Cedar Fort and Eagle Mountain were listed in the Federal Register as Communities at Risk in August 2001. Grantsville and Erda were identified as a community at risk by the Northern Utah Fuels Committee. Additional communities may be recognized as at risk within or adjacent to this unit as hazard assessments are completed and growth continues. About ¾ of fires are human-caused in this unit.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of sensitive vegetation type.
- Stop or reduce, as much as possible, the conversion of healthy ecosystems to cheatgrass.

- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper sites, they receive a little more moisture than the desert component, ranging from 8 to 12 inches of annual rainfall. Loss of shrub species due to fire, invasive plants, especially cheatgrass are a threat. Knapweed also invades these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component. Loss soil from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. Loss of wildlife habitat is a major concern in these sites. Due to the close proximity of these components to the major population, recreation uses are also common.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention. Encouraging public participation in the community fire planning is a priority in this area.

- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 5,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A09 by treatment and vegetation type:

Treatment Type	Wyoming big sage with juniper encroachment
Mechanical	700
Seeding	700

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper. They receive a little more moisture than the desert component. 1) Prevent the Loss of shrub species due to fire, invasive plants, especially cheatgrass, 2) Prevent, control, and attempt to eradicate noxious weed

species and invader species, such as knapweed and dyers woad. These species invade these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component, #) Prevention of soil loss from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes, 4) Stabilize drainages and gullies on burned sites. Development of raw gullies is a common problem on many of these burned sites, especially without any rehabilitation. 5) Enhance and aid in restoration of wildlife habitat, 6) Control recreation and protect use areas. Due to the close proximity of these components to the major population, recreation uses are also common.

Community Assistance and Protection Strategies
Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs or communities at risk identified, additional hazard assessments and fire planning would be initiated in cooperation with the State of Utah.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education strategies.

Local volunteer fire departments throughout the unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities within the respective departments.

FMU A10 South Oquirrh Mountain Area

Location Description
A10 includes the eastern half of the Oquirrh Mountains located in Salt Lake County and the southern half of the Oquirrh Mountains located in Tooele and Utah counties. The polygon bumps up against the Camp William Military Reservation. The cities and towns of High Country Estates, Ophir, Mercur, and Lark are located within this polygon.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A10 South Oquirrh Mountain Area	33,952	7,811				122,622

Characteristics
Annual precipitation averages 16 to 30 inches, slopes are generally 5 to 80%, andelevation is 5,500-10,000 feet above sea level. Ecological sites are generally Semi-Desert Shallow Loam, Semi-Desert Loam, Semi-Desert Gravelly Loam, Upland Shallow Hardpan, Upland Shallow Loam, Upland Loam, Upland Stony Loam, Mountain Loam, Mountain Shallow Loam, Mountain Gravelly Loam, High Mountain Loam, High Mountain Stony Loam, Subalpine Meadow, and Conifer Woodland.

The vegetation in this unit is diverse, but is dominated by juniper, mixed with big sagebrush, cliffrose, mountain mahogany, and pinyon. North slope areas contain Douglas fir, quaking

aspen, snowberry, bluebunch wheat, and mountain brome, with the lower canyon areas dominated by gambel oak, maple. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. Private lands on the extreme east slopes are used for dry land wheat farming.

This unit provides mule deer and elk summer range as well as crucial mule deer and elk winter range. The area is also important for raptor nesting and roosting. Chukar also inhabit the unit. Important foraging areas, as well as a roost site for the threatened bald eagle, occur in this unit. The bald eagle utilizes the unit October through March.

General dispersed recreation occurs in this area with increased use during the various fall hunting seasons. The unit receives motorized recreation use in Ophir Canyon, Mercur Canyon, and other areas near the Fivemile Pass recreation area.

Historic mining activity has occurred over much of this unit, including several ghost towns. Prehistoric sites are also known to occur within and adjacent to this unit.

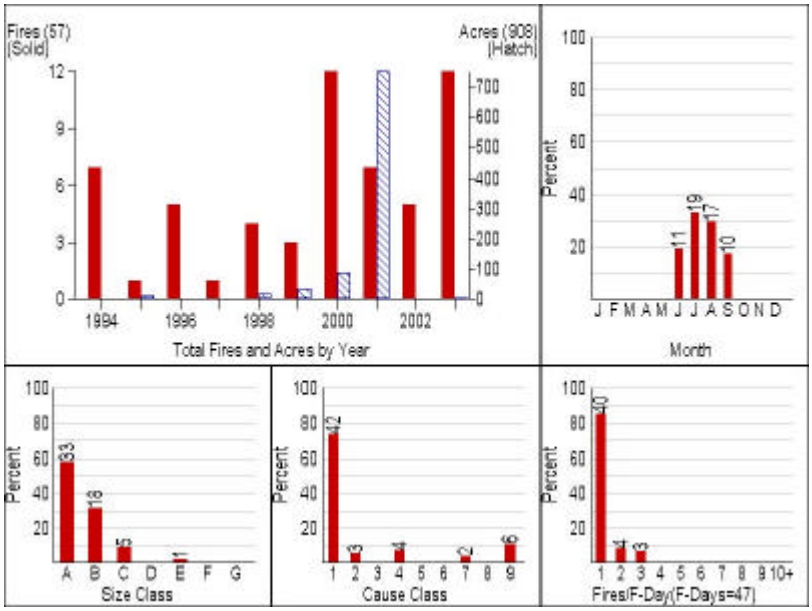
This FMU in Salt Lake County has the potential to contain Slender Moonwort (*Botrychium lineare*) C, Ute Ladies'-tresses (*Spiranthes diluvialis*) T, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[1,3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*) T.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

There are scattered ranches and homes in the northwest portion of the FMU and a number of current and historical mining structures throughout the FMU. Developments in this FMU include the Kennecott Copper Mine and Concentrator Buildings, a natural gas transmission pipeline, a 230 kv power transmission line, the Manning Canyon Repository, Butterfield Peak radio communication facility, and television communication facilities for 3 local channels on Mount Vision. The FMU borders the Deseret Chemical Depot, Camp Williams, and the Salt Lake Regional Wild Horse and Burro Center.

Fire History



From 1994 to 2003, 57 fires have occurred within the FMU, for a total of 908 acres. Lightning-caused fires account for nearly ¾ of all ignitions; the remainder is human-caused (equipment, campfire, arson). Fire season typically begins in June and ends in September. The Harrison fire (July 2001) was the largest fire at 736 acres. Most ignitions (60%) are suppressed at less than ¼-acre. Wildland fire behavior within this unit where vegetation is dominated by juniper, perhaps mixed with sagebrush, is best predicted by Fuel Model 6. North slope areas dominated with Douglas-fir would qualify for Fuel Model 8, and the canyon areas where there is a snowberry/quaking aspen/maple association, would best be predicted with Fuel Model 5. Rates of spread in these fuels are low to moderate.

Fire Regime/Condition Class

FMU A10 contains three PNVG's. The mountain shrubland PNVG occupies 54% of the land within the FMU and is fire regime II and condition class 3. The juniper-pinion infrequent fire PNVG occupies 25% of the land within the FMU and is fire regime 1and condition class 2. The interior Rocky Mountain Douglas fir PNVG occupies 21% of the FMU and is fire regime III and condition class 2. Due to the invasion of cheatgrass in adjacent FMU's at lower elevations, the mountain shrubs are at high risk of loss. The juniper-pinion and Douglas fir PNVG's are at moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
mountain shrub	33	2	3	2	mountain shrub	No current target
Douglas fir	19	3	2	2	Douglas fir	No current target
pinyon-	47	1	2	2	pinyon-	300

juniper					juniper	

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: riparian (1%)

Values at Risk
Primary values in this unit to be protected include mule deer and elk summer range, as well as crucial mule deer and elk winter range. Other important values at risk are dry land wheat crops, raptor habitat, including the bald eagle. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This unit includes the communities of Ophir, High Country Estates, and Herriman, and is adjacent to the town of Stockton. Ophir is a Community at Risk, as published in the August 2001 Federal Register. High Country Estates and Herriman have been identified as communities at risk by the Northern Utah Fuels Committee. There are scattered ranches and homes in the northwest portion of the unit. Additional communities may be identified as at risk as hazard assessments are completed and growth continues within or adjacent to this unit. There are also a number of current and historical mining structures. This unit borders the Deseret Chemical Depot and Camp Williams. Human-caused fires account for about one-fourth of the total fire causes.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible, and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.

- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper sites. They receive a little more moisture than the desert component. Loss of shrub species due to fire, invasive plants, especially cheatgrass is a threat. Knapweed also invades these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component. Lost soil from erosion is a issue of concern on these sites due to topography and areas that may have steep slopes. Development of raw gullies is a common problem on many of these burned sites, especially without any rehabilitation. Loss of wildlife habitat is a major concern in these sites. Due to the close proximity of these components to the major population, recreation uses are also common.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention. Encouraging public participation in the community fire planning is a priority in this area.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire

behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 500 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A10 by treatment and vegetation type:

Treatment Type	pinyon-juniper
Mechanical	700
Seeding	700

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education strategies.

Local volunteer fire departments throughout the unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities within the respective departments.

FMU A11 Fivemile Pass Recreation Area

Location Description

A11 is at Five Mile Pass, a heavily used OHV recreation area along the border of Tooele and Utah counties. It is approximately 3.25 miles southeast of the Tooele Army Depot South Area.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A11 Fivemile Pass	5,263	784				2,566

Characteristics
Annual precipitation averages 10 to 16 inches, slopes are generally 0 to 25%, and elevation is 5,500 feet above sea level. Major ecological sites are Semi-Desert Gravelly Loam, Semi-Desert Loam, Semi-Desert Sandy Loam, Semi-Desert Stony Loam, Upland Shallow Hardpan and Upland Shallow Loam.

This unit is dominated by juniper mixed with big sagebrush, black sagebrush, and bitterbrush. Cliffrose can be found on south facing slopes. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. Private lands to the east are used for dry land wheat farming.

This unit provides mule deer and elkl winter range. Significant populations of ferruginous and Swainson's hawks nest within this unit, both BLM, Utah, State Sensitive Species. The threatened bald eagle uses this unit as a foraging and day roost area in winter.

General, high recreation use occurs in this area. Recreational activities are predominated by OHV use and camping,. Illegal target shooting also occurs in this area, as the unit is closed to target shooting on public lands. This area is being considered for formal designation as a Recreation Site. The Pony Express/Overland Stage Route, designated as a National Historic Trail and BLM Back Country Byway, passes through this unit. Special Recreation Permits and authorizations in the Fivemile Pass area include OHV group rides, OHV rodeos, and Utah State Park OHV education classes, an annual mountain bike race, and large group camping authorizations.

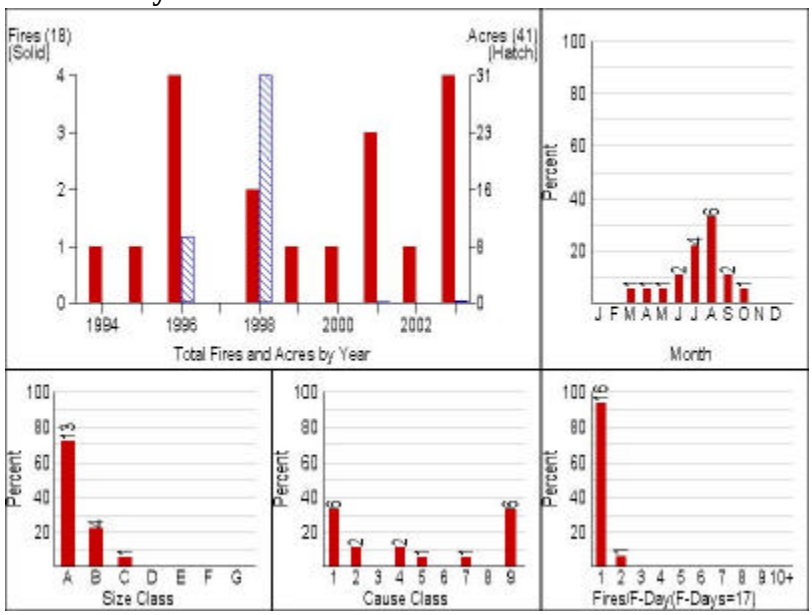
Historic Mining activity has occurred over much of this unit. Prehistoric sites are also known to occur within and adjacent to this unit. The Pony Express/Overland Stage Route passes through this unit.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

Developments in this area relate to past and current mining activities, as well as BLM informational signing tied to recreation activities at this site.

Fire History



From 1994 to 2003, 18 fires have occurred within the FMU, for a total of 41 acres. Lightning-caused fires account for one-third of all ignitions; two-thirds are human-caused. Fires have been reported from May through October. A single fire in June 1998 was the largest fire at 30 acres, accounting for 73% of the total acreage burned in the previous 10 years. Most ignitions (70%) are suppressed at less than ¼-acre. Wildland fire behavior on lands within this unit is best predicted by Fuel Model 6. Rates of spread in these fuels are moderate. Overall, fire frequency in this unit is moderate. Due to high recreation use, safety of public land users is a concern for fire management in this area.

Fire Regime/Condition Class

FMU A11 only contains the Wyoming big sagebrush PNVG. This PNVG is fire regime III and condition class 3. Due to the invasion of cheatgrass in the FMU, the Wyoming big sagebrush PNVG is at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush with tree encroachment	96	3	3	1	Wyoming big sagebrush	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: salt desert shrub (4%).

Values at Risk

Historic Mining activity has occurred over much of this unit. Prehistoric sites are also known to occur within and adjacent to this unit. The Pony Express/Overland Stage Route passes through this unit.
Additional values to protect include mule deer winter range, raptor habitat, especially for the ferruginous and Swainson's hawks, raptor nesting in juniper, and habitat for the bald eagle. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk or of concern within this unit. Communities may be identified as at risk as hazard assessments are completed and as a result of development within or adjacent to this unit. Two-thirds of fires in this unit are human-caused. This unit includes the Fivemile Pass Special Recreation Area. Private lands to the east are used for dry land wheat farming. Developments in this area relate to past and current mining activities, as well as BLM informational signing tied to recreation activities at this site

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass. Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of

impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.

- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper sites, they receive a little more moisture than the desert component. Loss of shrub species due to fire, invasive plants, especially cheatgrass are a threat. Knapweed also invades these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture and better soils than the desert component. Lost soil from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes. Development of raw gullies is a common problem on many of these burned sites, especially without any rehabilitation. Loss of wildlife habitat is a major concern in these sites. Due to the close proximity of these components to the major population, recreation uses are also common
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Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 50 acres. Once the decadal burn target has been reached at 100 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- No targets have been identified for FMU A11.
- Prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within or adjacent to this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education objectives and strategies.

Local volunteer fire departments that respond to fires within this unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention and suppression capabilities within the respective departments.

FMU A12a Lake Mountain
FMU A12b West Mountain Areas

Location Description

A12a is on the Eastern side of Utah Lake and includes West Mountain. It is directly west of the town of Payson, located in Utah County.

A12b is on the western side of Utah Lake in Utah County. It encompasses Lake Mountain and some of the Eagle Mountain community

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A12a Lake Mountain	8,344	1,469				4,831
FMU A12b West Mountain Areas	16,483	12,372				12,639

Characteristics

Annual precipitation averages 10 to 20 inches, slopes are generally 10 to 60%, A12a elevation is 4,500-6,500 and A12b is 5,000-7,500 feet above sea level. Major ecological sites are Upland Loam, Upland Stony Loam, Upland Shallow Hardpan, Semi-Desert Alkali Loam, Semi-Desert

Shallow Hardpan, Semi-Desert Shallow Loam, Mountain Stony Loam, and Mountain Gravelly Loam.

Lower elevations in this unit are dominated by cheatgrass with some stands of sagebrush. Juniper, mountain mahogany, serviceberry, Douglas fir, and bluebunch wheatgrass dominate higher elevation areas. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. Much of the lower elevation private lands are used for dry land wheat farming.

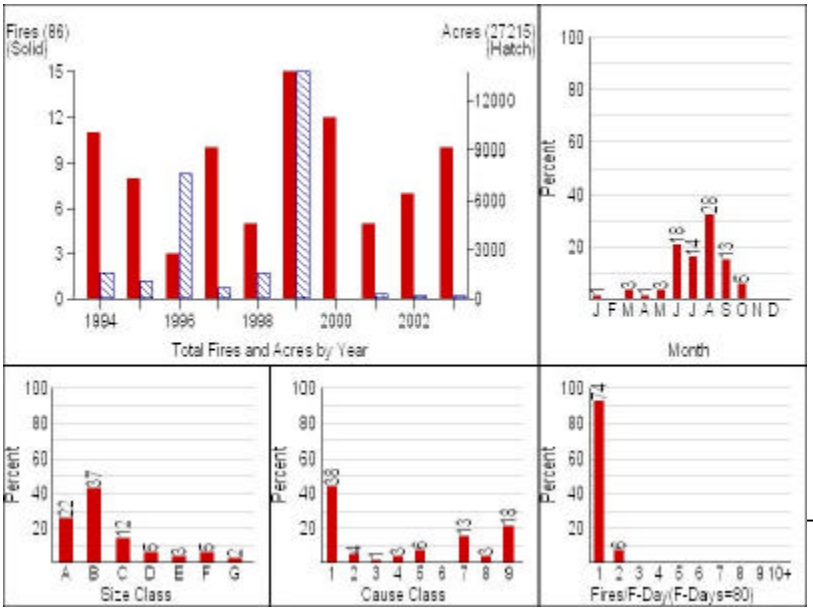
This unit provides year round mule deer range. Chukar and a variety of raptor species also inhabit the unit. The ring-necked pheasant is common in the low elevations of the unit.

General dispersed recreation occurs throughout this area **.** A high amount of target shooting occurs on the west side of the Lake Mountains. Large group camping use occurs at Soldier Pass.

Cultural resources in this unit include prehistoric sites and rock art sites in both locations. This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

Both Lake Mountain and West Mountain are becoming more impacted by urban development related to new homes and commercial developments. The 2 Kern River natural gas transmission pipelines, 138 kv power transmission line, an explosives plant with storage facilities, a tire disposal facility, and active mining operations. Brigham Young University has an Observatory on top of West Mountain and there are also several communication facilities at the top of each of the mountain ranges including a Federal Aviation Authority (FAA) facility for air traffic control at Salt Lake International Airport on Lake Mountain.

Fire History



From 1994 to 2003, 86 fires have occurred within the FMU, for a total of 27,215 acres. Human-caused fires account for 56% of all ignitions; the remainder are lightning-caused. Due to the proximity of Lake Mountain and West Mountain to the urban interface and the abundant of fine dead fuels, human-caused ignitions outnumber the natural causes. About 15% of all fire reports

have been recorded as arson. Fires have been reported nearly year-round. Ignitions are seldom suppressed at less than ¼-acre; approximately 75% of all unplanned ignitions exceed .25 acres. On the average, it is expected that 1 fire will exceed 300 acres each year in this FMU.

Wildland fire behavior on BLM lands within this unit is best predicted by Fuel Model 1 at the lower elevations where cheatgrass is dominant. Higher elevations would best be predicted by Fuel Model 6. Rates of spread in these fuels are moderate to high. Both lightning and human-caused fires are common. Fire frequency in this unit is high

Fire Regime/Condition Class
FMU A12 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 79% of the land and falls in fire regime III and condition class 3. The juniper-pinyon infrequent fire PNVG occupies 21% of the land and falls in fire regime I and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush with tree encroachment	64	3	3	1	Wyoming big sagebrush	400
pinyon-juniper	30	2	3	1	pinyon-juniper	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mixed conifer (2%), mountain shrubland (2%), and salt desert shrub (2%).

Values at Risk
The primary values to be protected are mule deer range, ring-necked pheasant habitat and raptor habitat. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Saratoga Springs and Eagle Mountain are on the Communities at Risk list published in the Federal Register. Saratoga Springs is located in the Lake Mountain area and extends into FMU A21. Eagle Mountain is also in the Lake Mountain area of this unit and extends through FMU A09 and A21. Genola borders the West Mountain Area to the south. The Northern Utah Fuels Committee has identified Payson, which borders the West Mountain Area to the east, as a

community at risk. Both Lake Mountain and West Mountain are becoming more impacted by urban development related to new homes and commercial developments.

There are also essential communication sites at the top of each of the mountains. Adjacent private lands in the north portion of Lake Mountain contain an explosives plant, a tire disposal facility, and active mining operations. There is a high fire occurrence in this area with over half of the fires being human-caused.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible, and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland

game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper sites, they receive a little more moisture than the desert component, ranging from 8 to 12 inches of annual rainfall. Loss of shrub species due to fire, invasive plants, especially cheatgrass are a threat. Knapweed also invades these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component. Loss soil from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. Loss of wildlife habitat is a major concern in these sites. Due to the close proximity of these components to the major population, recreation uses are also common.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention. Additional communities would be identified through a hazard assessement of that community and the surrounding area. Encouraging public participation in the community fire planning is a priority in this area.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the

decadal burn target has been reached at 15,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use
Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A12 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment
Mechanical	400
Prescribed Fire	200

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.

These sites represent the areas of salt shrub, sagebrush/grass, and juniper. They receive a little more moisture than the desert component. 1) Prevent the Loss of shrub species due to fire, invasive plants, especially cheatgrass, 2) Prevent, control, and attempt to eradicate noxious weed species and invader species, such as knapweed and dyers woad. These species invade these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component, 3) Prevention of soil loss from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes, 4) Stabilize drainages and gullies on burned sites. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. 5) Enhance and aid in restoration of wildlife habitat,

Community Protection/Community Assistance Strategies
Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within or adjacent to this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education strategies.

Local volunteer fire departments throughout the unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention and suppression capabilities within the respective departments.

FMU A13 Laketown Canyon Area

Location Description
A13 is in Rich County in the northeastern corner of the field office. The FMU consists mainly of the BLM portion of the Laketown Canyon ACEC.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A13 Laketown Canyon Area	10,982	79	4			7,142

Characteristics
Annual precipitation averages 16 to 20 inches, slopes are generally 24 to 40%, and elevation is 6,500-7,000 feet above sea level. Major ecological sites include Semi-Desert Loam, Semi-Desert Shallow Loam, Semi-Desert Stony Loam, Semi-Desert Clay, Upland Shallow Loam, Upland Loam, Upland Clay, Upland Stony Loam, Semi-Wet Meadow, Semi-Wet Streambank, Wet Fresh Streambank, Semi-Wet Fresh Streambank, Mountain Gravelly Loam, Mountain Clay, Mountain Stony Loam, Mountain Windswept Ridge, and High Mountain Loam.

The dominant vegetation types in this unit include mountain mahogany, Douglas fir, quaking aspen, chokecherry, snowberry, serviceberry, black sagebrush, big sagebrush, arrowleaf balsamroot, and bluebunch wheatgrass. Alderleaf mountain mahogany can also be found in the unit. Lower elevations have scattered juniper and big sagebrush, with a bluebunch wheatgrass and cheatgrass understory. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit is an ACEC and is the watershed for the community of Laketown. Moose, elk, and mule deer use the area as year round range as well as crucial winter range. The sagebrush dominated areas of the unit provide habitat for sage grouse, and the densely forested areas provide habitat for the ruffed grouse. The area is also utilized by the threatened bald eagle. Laketown Creek provides habitat for the Bear River variety of the Bonneville Cutthroat trout, a BLM, Utah, State Sensitive Species. The stream also provides a valuable irrigation source to neighboring landowners.

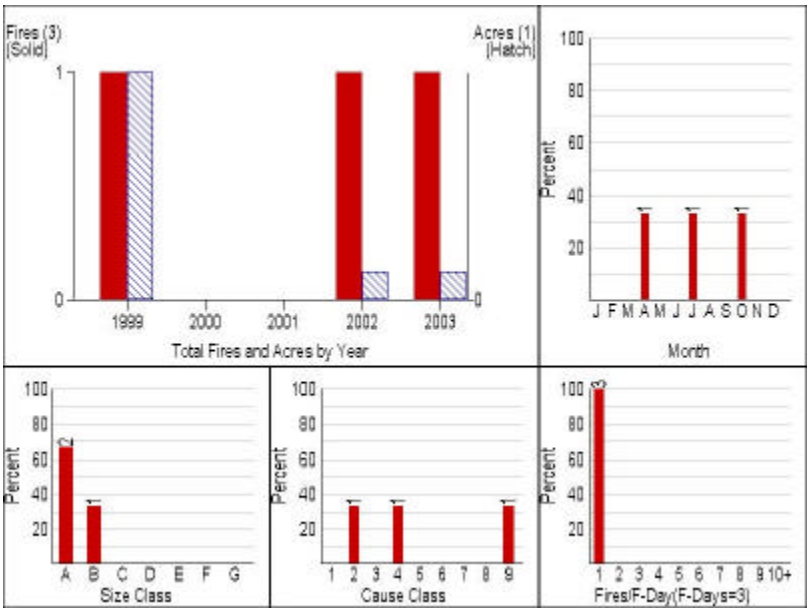
This area has high-dispersed recreation through most of the year. Recreation use includes hunting, fishing, mountain biking, snowmobiling, and hiking.

Few cultural resource inventories have been conducted on this unit. However, models suggest that prehistoric sites are probable.

This FMU in Rich County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Black-footed Ferret[6] (*Mustela nigripe*) E, and the Canada Lynx (*Lynx Canadensis*) T.

Improvements within and adjacent to the FMU, include residential homes, cabins, power lines, a water treatment facility, and range improvements.

Fire History



From 1994 to 2003, only 3 fires have been reported in this FMU, for a total of 1 acre. All fires were human-caused occurring in April, July, and October. Wildland fire behavior is best predicted by Fuel Model 6 where sagebrush dominates; however, in those areas dominated by snowberry/quaking aspen association, Fuel Model 5 would be a better choice. In areas dominated by Douglas fir, fire behavior would be predicted by Fuel Model 8. At lower elevations where there is scattered juniper with cheatgrass understory Fuel Model 2 may be a better predictor of fire behavior. Rates of spread in this unit are generally low to moderate, but in extreme burning conditions will be high. Historical fire occurrence in this unit is very low. Potential for human caused fires is high.

Fire Regime/Condition Class

FMU A13 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 60% of the land and falls in fire regime III and condition class 3. The mountain shrubland PNVG occupies 40% of the land and falls in fire regime II and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush	58	3	3	1	Wyoming big sagebrush	160
mountain shrubland	42	2	3	1	mountain shrubland	80

Values at Risk
Values to be protected include the Laketown Creek and watershed, moose, elk, and mule deer year-round and crucial winter range, habitat for sage grouse, roughed grouse, and the bald eagle, Bonneville Cutthroat trout, rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Improvements within and adjacent to the unit, include residential homes, cabins, power lines, a water treatment facility, and range improvements. This unit includes Bug Lake/Old Laketown Canyon that was identified as a Community at Risk in the August 2001 Federal Register and also borders the community of Laketown. Laketown was identified by the Northern Utah Fuels Committee as a community at risk. Although with fairly low occurrence, all fires reported in this unit have been human-caused.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible to minimize damage to the Laketown, Utah's municipal watershed and for the BLM, Utah, State Sensitive Bonneville cutthroat trout habitat.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which would improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities would not be allowed in this FMU.

- Prescribed fire and mechanical/chemical treatments would be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and spaced at proper distances to not impact local wildlife.
- Prescribed fires and mechanical/chemical treatments would be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments would normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

1) Prevent the Loss of shrub species due to fire, invasive plants, especially cheatgrass, 2) Prevent, control, and attempt to eradicate noxious weed species and invader species, such as knapweed and dyers woad. These species invade these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component, 3) Prevention of soil loss from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes, 4) Stabilize drainages and gullies on burned sites. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. 5) Enhance and aid in restoration of wildlife habitat, 6) Control recreation and protect use areas. Due to the close proximity of these components to the major population, recreation uses are also common.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 1 acre 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 10 acres. Once the decadal

burn target has been reached at 100 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A13 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush	mountain shrubland
Mechanical	160	80
Seeding	160	80

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs or areas identified as at risk within or adjacent to this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education objectives and strategies.

Local volunteer fire departments throughout the unit will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities within the respective departments.

FMU A14 Gold Hill Area

Location Description

A14 is in the southwestern corner of Tooele County near the Deep Creek Mountains. It contains the towns of Gold Hill and Clifton

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres

FMU A14 Gold Hill Area	29,287	3,123				4,052

Characteristics

Annual precipitation averages 8 to 16 inches, slopes are generally 15 to 40%, and elevation is 5,500-57,500 feet above sea level. Major ecological sites are Alkali Flat, Desert Alkali Bench, Desert Silt Flat, Desert Shallow Loam, Desert Silt Loam, Semi-Desert Loam, Semi-Desert Gravelly Loam, Semi-Desert Shallow Loam, Semi-Desert Shallow Hardpan, Semi-Desert Very Shallow Loam, Upland shallow Hardpan, Upland Stony Loam, Upland shallow Loam and Upland Loam.

The dominant vegetation in the low elevations of this unit are shadscale, horsebrush, ephedra, rabbitbrush, snakeweed, black sagebrush, and areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, squirreltail, and cheatgrass. Forbs include globemallow, princess plume, and a variety of annual forbs. Upper elevations of the unit are dominated by big sagebrush, juniper, and pinyon, which occur throughout the unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

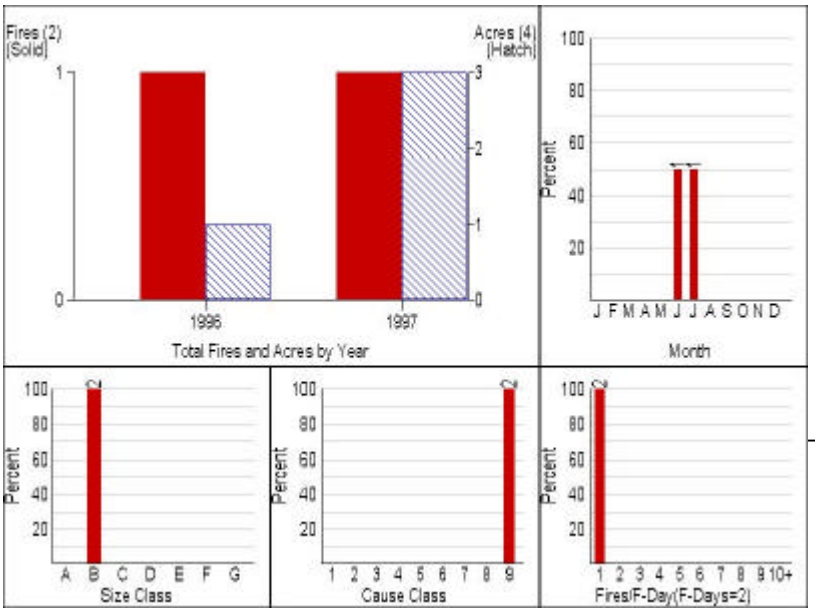
The sagebrush areas in this unit provide crucial deer winter range. Pronghorn antelope and chukar use is high in this unit. Some moderate value for watershed exists related to the local spring sources.General dispersed recreation occurs in this area with increased use during the various fall hunting seasons.

Cultural values in this unit include both prehistoric sites and historic mining sites.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Mining facilities and mining claim properties are scattered through the FMU along with a few range improvements.

Fire History



From 1994 to 2003, only 2 fires have been reported in this FMU, for a total of 4 acres. Both fires were human-caused occurring in June and July.
Wildland fire behavior in this vegetation type is best predicted by Fuel Model 2. Rates of spread in this unit are low to moderate. Fire occurrence is minimal.

9/12/2004

Fire Regime Condition Class
FMU A14 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 80% of the land and falls in fire regime III and condition class 3. The juniper-pinyon infrequent fire PNVG occupies 20% of the land and falls in fire regime I and condition class 2. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush with tree encroachment	75	3	3	1	Wyoming big sagebrush	150
pinyon-juniper	20	2	3	1	pinyon-juniper	50

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: salt desert shrub (6%).

Values at Risk
Important values to be protected in this unit include sagebrush areas that provide crucial deer winter range, watersheds that feed springs, and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are a few individuals living in the community of Gold Hill. Gold Hill is a Community at Risk as published in the August 2001 Federal Register. Mining structures are also associated with this community as well as mining claim properties scattered through the unit. A few range improvements are located in the unit. In the 10-year history (1994-2003) all fires reported in this unit were human-caused.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which would improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The sites in this component represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1. Stabilize and Prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil. 2. The second objective would be to rehabilitate the site to a condition as close to the desired range condition as feasible in order to create vegetative diversity using native vegetative species to include components of perennial grasses, forbs and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource. Treatment techniques could involve burning, chemical, biological, and/or mechanical. These sites would be reseeded with a stabilization mix under the stabilization plan, and a designated mixture designated by resource specialists for the Rehabilitation plan. Areas were fire breaks or controls were needed, the SLFO greenstrip seed mixture would be used. Seed would be applied by drilling, aerial, broadcast, and/or hand planting.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.
- Increase public awareness of the benefits of fire.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 300 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU A14 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment	pinyon-juniper
Mechanical	150	50
Seeding	150	50

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

- Prescribed fire may also be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies
A hazard assessment, community fire plan and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development or areas at risk are identified within or adjacent to this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

The closest fire resources are in Ibapah and Wendover. These fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU A15 Stansbury Island Area

Location Description
A15 is the Stansbury Island unit in Tooele County at the south end of the Great Salt Lake.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
A15 Stansbury Island	13,324	60				11,926

Characteristics
Annual precipitation averages 10 to 16 inches, slopes are generally 0 to 100%, and elevation 4,500-6,500 feet above sea level. Ecological sites are mainly Alkali Flat, Desert Flat, Desert Gravelly Loam, Semi-Desert Gravelly Loam, Semi-Desert Shallow Loam, Semi-Desert Loam, Semi-Desert Shallow Hardpan, Semi-Desert Stony Loam, Upland Gravelly Loam, Upland Shallow Hardpan, Upland Stony Loam, and Upland Loam.

The dominant vegetation type in this unit is desert shrubs characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, sand dropseed, and cheatgrass. Varieties of annual forbs occur in the unit. Juniper trees are very scattered with heavier concentrations at the upper elevations of the unit. Associations of these plants vary throughout the unit, and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. This area has been impacted by fire in the past, which has converted much of the lower elevation desert shrub communities to cheatgrass and other annuals.

This area is utilized by a number of raptors which nest in the junipers and rock ledges of the unit, as well as the burrowing owl, a BLM, Utah, State Sensitive Species. A small deer herd also inhabits the area. Chukar are common through most of the unit.

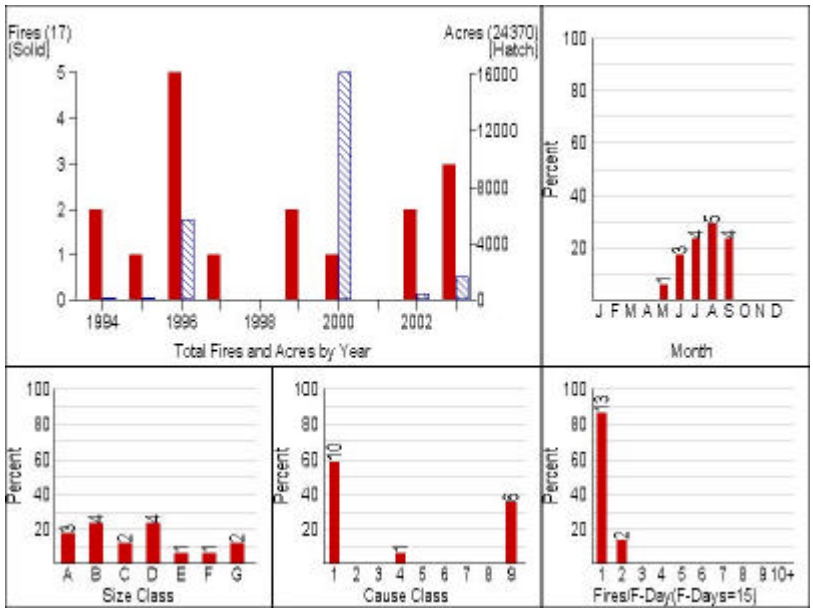
Dispersed recreation occurs throughout the unit. Recreation activities include mountain biking, rock climbing, target shooting, camping, and OHV use. The Stansbury Island Mountain Bike Trail is located on the southwest side of the island. The mountain bike trail receives the highest amount of use during the spring.

Cultural resources in this unit include cave and rock shelter sites, and a large rock art site on adjacent private lands.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Developments in the FMU consist of recreational signing of the mountain bike trail, structures related to sand and gravel extraction activities, facilities for salt manufacturing, and a few range improvements.

Fire History



From 1994 to 2003, 17 fires have occurred within the FMU, for a total of 24,370 acres. Lightning-caused fires account for nearly 60% of all ignitions; the remainder are human-caused. Fires have been reported from May through September. Ignitions are seldom suppressed at less than ¼-acre; approximately 82% of all unplanned ignitions exceed .25 acres. On the average, it is expected that 1 fire will exceed 10 acres each year in this FMU. Wildland fire behavior is best predicted by Fuel Model 2 on the lower elevations of the Island where desert shrub with a cheatgrass understory is common. Fire behavior on the lower to middle slopes where cheatgrass is dominant is best predicted by Fuel Model 1. In some cases where scattered juniper is present, fire behavior would be predicted by Fuel Model 2. Rates of spread in this light to moderate fuels are moderate to extreme. The effect of the lake on local wind conditions during a hot summer afternoons, combined with prevailing general winds near the ridges, results in extremely erratic and intense fire behavior. Fire occurrence is high in this unit. Lightning has been the predominant source of ignitions, but human caused fires have occurred.

Fire Regime/Condition Class
FMU A15 contains two PNVG's. The salt desert shrub PNVG occupies 75% of the land and falls in fire regime 5 and condition class 3. The juniper-pinion infrequent fire PNVG occupies 25% of the land and falls in fire regime 1 and condition class 3. Due to the extreme invasion of cheatgrass within the FMU, both PNVG's are at a very high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	66	5	3	1	salt desert shrub	No current target
pinyon-juniper	34	1	3	1	pinyon-juniper	No current target

Values at Risk
Values to be protected are the desert shrub plant community, habitat for mule deer, the burrowing owl, and other raptors. The cultural values described under the Characteristics section of this unit are at risk.

The Stansbury Island Mountain Bike Trail is at risk.

Communities at Risk
There are no Communities at Risk in this unit. If development were to occur, a hazard assessment would identify any communities at risk within or adjacent to this unit. Human-caused fires account for 40% of all fires.

Developments in the unit consist of recreational signing of the mountain bike trail, structures related to sand and gravel extraction activities, and range improvements such as fences and corrals.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities would not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances to not impact wildlife species.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives
1) Prevent the Loss of shrub species due to fire, invasive plants, especially cheatgrass, 2) Prevent, control, and attempt to eradicate noxious weed species and invader species, such as knapweed and dyers woad. These species invade these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component, 3) Prevention of soil loss from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes, 4) Stabilize drainages and gullies on burned sites. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. 5) Enhance and aid in restoration of wildlife habitat, 6) Control recreation and protect use areas. Due to the close proximity of these components to the major population, recreation uses are also common.

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.
- Increase awareness of the benefits of fire in the ecosystem.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 500 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the decadal burn target has been reached at 15,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for general wildland fire education objectives and strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU A16 Lakeside Mountain Areas

Location Description

A16 is located on the western shores of the Great Salt Lake. It encompasses the BLM lands of the Lakeside Mountains. It is split on its north end by the County line that divides Tooele and Box Elder Counties.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A16	20,069	3,515				4,477

Lakeside MountainAreas						

Characteristics
Annual precipitation averages 8 to 12 inches, slopes are generally 26 to 50%, and elevation is 4,500-6,500 feet above sea level. Ecological sites are mainly Alkali Flat, Desert Flat, Desert Gravelly Loam, Semi-Desert Gravelly Loam, Semi-Desert Shallow Loam, Upland Gravelly Loam, and Upland Shallow Hardpan.

Vegetation within this unit is primarily juniper, cliffrose, big sagebrush, black sagebrush, bluebunch wheatgrass, Salina wildrye, and desert shrub species such as ephedra and shadscale in the lower elevations of the unit. Lower elevations of this area have been converted to cheatgrass and other annuals due to past fire activity and invasion of exotic species. Some isolated patches of curl-leaf mountain mahogany occurs at the higher elevations. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This area has mule deer year round use as well as pronghorn year round use in the low elevations of the unit. This unit is also important habitat for chukar. Isolated junipers within this unit are commonly used by nesting raptors, including ferruginous and Swainson's hawks, BLM, Utah State Sensitive Species.

In general, dispersed recreation occurs in this area with increased use during the various fall hunting seasons.

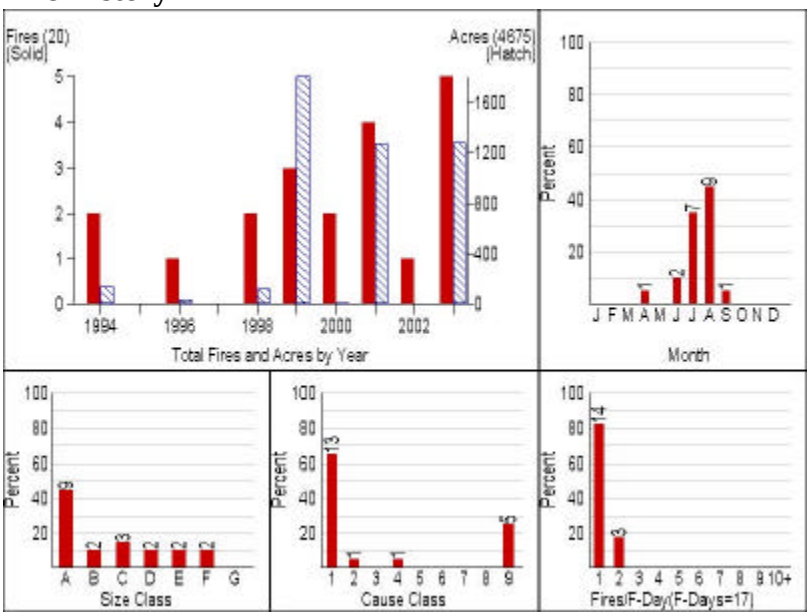
Cultural resources in this unit include cave and rock shelter sites.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Major improvements within the FMU include several communication sites and a Federal Aviation Authority (FAA) air traffic control radio communications facility for Salt Lake International Airport located on Black Mountain. In addition, there are structures at the Marblehead plant and a 69 kv power transmission line. Historic mining structures are also found on the FMU. Less significant improvements include several wildlife guzzlers and other rangeland improvements.

Fire History



From 1994 to 2003, 20 fires have occurred within the FMU, for a total of 4,675 acres. Lightning-caused fires account for 65% of all ignitions. Due to the abundance of fine dead fuels (cheatgrass), fires spread rapidly under the influence of afternoon lake breezes. Fires have been reported from April through September. Ignitions are suppressed at less than ¼-acre nearly half of the time. On the average, it is expected that 1 fire will exceed 10 acres each year in this FMU.

Wildland fire behavior in this vegetation type is best predicted by Fuel Model 2 at lower elevations where desert shrub is prevalent. Low to middle elevation areas where cheatgrass is dominant is best predicted by Fuel Model 1. Higher elevations where juniper is the primary vegetation are best represented by Fuel Model 6. Rates of spread in these light to moderate fuels are moderate to extreme. The lake has an effect on local winds in the east drainages. Fire occurrence is high in this unit. Lightning has been the largest source of ignitions, but some human caused fires have also occurred.

Fire Regime/Condition Class

FMU A16 contains three PNVG's. The Wyoming big sagebrush PNVG occupies 45% of the FMU and falls in fire regime III and condition class 3. The salt desert shrub PNVG occupies 35% of the land and falls in fire regime V and condition class 3. The juniper-pinion infrequent fire PNVG occupies 20% of the land and falls in fire regime I and condition class 3. Due to the extreme invasion of cheatgrass within the FMU, all three PNVG's are at a very high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested Wyoming big sagebrush	38	3	3	1	Wyoming big sagebrush	No current target

pinyon-juniper	31	1	3	1	pinyon-juniper	No Target
cheatgrass infested salt desert shrub	31	5	3	1	salt desert shrub	No target

Values at Risk

In addition, primary values to protect in this unit include desert shrub plant community at lower elevations, mule deer and pronghorn year-round habitat, and habitat for the ferruginous and Swainson's hawks. Other values include rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk

There are no Communities at Risk in this unit. However, critical communication sites are housed within this unit. Major improvements within the unit include several communication sites and the Federal Aviation Authority (FAA) Doppler radar site for Salt Lake International Airport located on Black Mountain. In addition, there are structures at the Marblehead plant and Poverty Point. Mining structures are also found on the unit. Less significant improvements include several wildlife guzzlers and other rangeland improvements. Human-caused fires account for 35% of all fires.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
-

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.

- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The sites in this component represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1. Stabilize and Prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil. 2. The second objective would be to rehabilitate the site to a condition as close to the desired range condition as feasible in order to create vegetative diversity using native vegetative species to include components of perennial grasses, forbs and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Treatment techniques could involve burning, chemical, biological, and/or mechanical. These sites would be reseeded with a stabilization mix under the stabilization plan, and a designated mix designated by resource specialists for the Rehabilitation plan. Areas that fire breaks or controls were needed; the SLFO greenstrip seed mix would be used. Seed would be applied by drilling, aerial, broadcast, and/or hand planting.

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.
- Increase public awareness of the benefits of fire in the ecosystem.

Fire Management Strategies

Suppression

- The primary strategy within this FMU would apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies

would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 5,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for wildland fire education strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU A17a Rush Valley South
FMU A17b Rush Valley North

Location Description

A17a is in Tooele County along its border with Juab County. It is located south of the Wasatch Cache National forest located in the Sheeprock Mountains.

A17b is in Tooele County on the north side of the Wasatch Cache National forest in the Sheeprock Mountainss. The towns of Vernon, Faust and Lofgreen are included in this FMU.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A17a Rush Valley South	4,801					1,175
FMU A17b Rush Valley North	81,173	8,882				35,553

Characteristics

Annual precipitation averages 8 to 12 inches, slopes are generally 0 to 20%, A17a elevation is 7,000-8,000 and A17b is 5,500-6,000 feet above sea level. Major ecological sites include Desert Shallow Loam, Desert Loam, Desert Clay Loam, Desert Gravelly Loam, Desert Silt Flat, Semi-Desert Loam, Semi-Desert Alkali Loam, Semi-Desert Shallow Hardpan, Semi-Desert Stony Loam, Semi-Desert Sandy Loam, and Upland Stony Loam.

Vegetation within this unit is dominated by big sagebrush, black sagebrush, greasewood, winterfat, pygmy sagebrush, and scattered patches of Gardner saltbush in the low elevations of the unit. Understory is mixed perennial and annual grasses with annuals predominating. Isolated and scattered juniper exists in the higher elevations of the unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit is deer winter range. In addition, this unit is a high use pronghorn area. Sage grouse utilize portions of this unit. Ferruginous and Swainson's hawks, both BLM, Utah State Sensitive Species, and other raptor use is common in the area. This unit is an important area for the threatened bald eagle, which forages and roosts in the unit. This area is also inhabited by the kit fox, a BLM, Utah State Sensitive Species.

Pohl's milkvetch (*Astragalus lentiginosus var. pohlii*), a BLM, Utah, State Sensitive Species, is located in the mixed basin big sagebrush/greasewood community in lower Rush Valley.

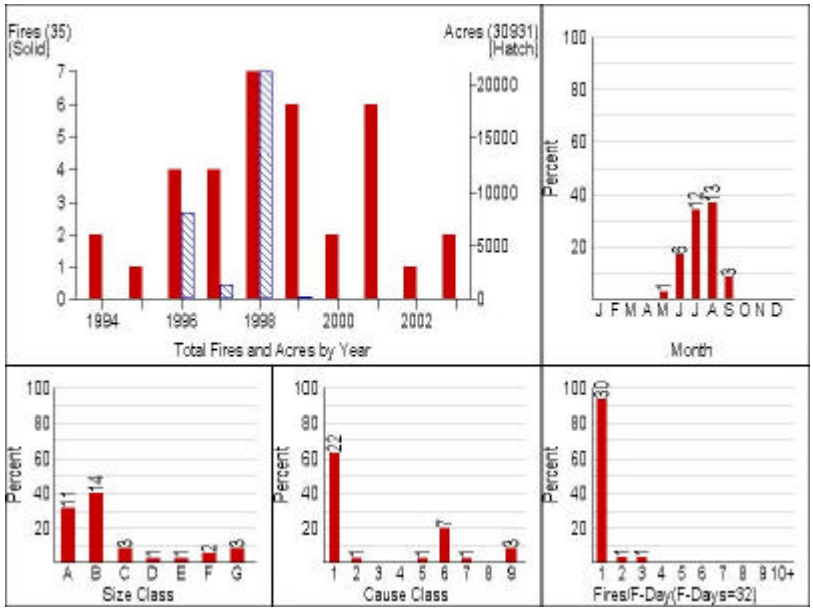
In general, dispersed recreation occurs in this area with increased use during the various fall hunting seasons and various holidays throughout the year. Increased year round recreation is focused along the Pony Express/Overland Stage Route, which has been designated a National Historic Trail and BLM Back Country Byway. A Special Recreation Permit (SRP) has been authorized for Walkabout Therapeutic Expeditions throughout the western portion of the units A17a and A17b. Walkabout is a wilderness youth treatment program which is authorized to operate year round on public lands. Up to five groups camp and hike throughout the operating area.

This unit contains portions of the Pony Express/Overland Stage Route and the Pony Express stations of Rush Valley and Faust. Concentrations of prehistoric sites have been identified at several areas within this unit.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU includes the community of Vernon and associated private residences and commercial developments. There are scattered ranch structures in the southern portion of the FMU. Other facilities include the Deseret Chemical Depot and incinerator, State Highway 36, the Union Pacific Railroad and associated communication sites, and miscellaneous range improvements.

Fire History



From 1994 to 2003, 35 fires have occurred within the FMU, for a total of 30,931 acres. Lightning-caused fires account for about 63% of all ignitions. Fires have been reported from May through September. Ignitions are suppressed at less than 10 acres nearly 70% of the time. On the average, it is expected that 1 fire will exceed 10 acres each year in this FMU. Wildland fire behavior in this unit is best predicted by Fuel Model 6. Rates of spread in the unit are moderate. Fire occurrence is moderate.

Fire Regime/Condition Class

FMU A17 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 63% of the FMU and falls in fire regime III and condition class 3. The salt desert shrub PNVG occupies 37% of the land and falls in fire regime V and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested Wyoming big sagebrush	64	3	3	1	Wyoming big sagebrush	No current target
cheatgrass infested salt desert shrub	36	5	3	1	salt desert shrub	No current target

Values at Risk
Values to be protected include mule deer winter range and habitat for the pronghorn, sagegrouse, ferruginous and Swainson's hawks and other raptors, the bald eagle and kit fox. Other values to be protected include the Pohl's milkvetch (*Astragalus lentiginosus var. pohlii*) rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This unit includes the communities of Vernon, Lofgreen, and associated private residences and commercial developments. There are scattered ranch structures in the southern portion of the unit. The Northern Utah Fuels Committee has identified Vernon and Lofgreen as communities at risk. Additional communities may be identified as at risk as hazard assessments are completed and growth continues within or adjacent to this unit. Approximately 38% of all fires are human-caused.

Other facilities include the Deseret Chemical Depot and incinerator, the railroad and associated communication sites, an informational kiosk on the Pony Express/Overland Stage Route, and miscellaneous range improvements.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible, and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which would improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General

application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.

- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The sites in this component represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil. 2) Rehabilitate the unit to a desired range condition including the use of native species perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the

decadal burn target has been reached at 15,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans, and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments would be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU A18a Hansel Mountains
FMU A18b West Hills & Blue Springs Hills Areas
FMU A18c Promontory Mountain

Location Description

A18a is on the north end of the Great Salt Lake in Box Elder County. It encompasses the Hansel and North Promontory Mountains.

A18b is in eastern Box Elder County and encompasses the west hills.

A18c is located on the northern shores of the Great Salt Lake in Box Elder County. It encompasses the Promontory Mountains and the historic site at Promontory point.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU A18a Hansel	755	1,784				66,643	

Mountains							
A18b West Hills & Blue Springs Hills Areas	992	4,093				126,929	629
A18c Promontory Mountains	946	1,325	6		13	88,273	

Characteristics
Annual precipitation averages 18 to 20 inches, slopes are generally 26 to 40%, A18a elevation is 5,000-6,000 A18b is 5,000-6,500, and A18c is 4,500-6,500 feet above sea level. The major ecological site is Upland Stony Loam with gravels in the soil.

The dominate vegetation in this unit is juniper, big sagebrush, black sagebrush, bitterbrush, snakeweed, rabbitbrush, bluebunch wheatgrass, and cheatgrass. Portions of this unit have been converted to winter wheat and other agricultural crops. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit provides year round habitat for mule deer and pronghorn. The lower elevations of this unit provide habitat for the sharptailed grouse, chukar, and Hungarian partridge.

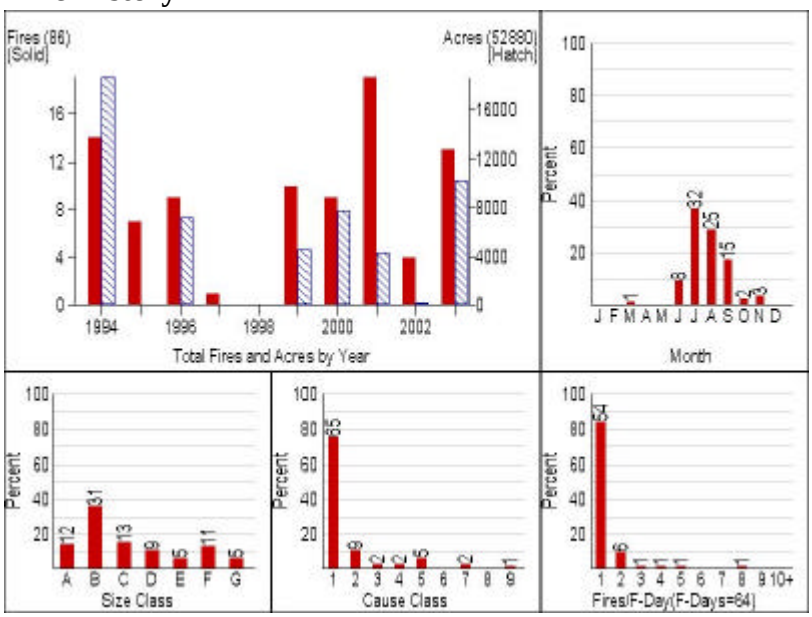
In general, dispersed recreation occurs in this area, but is limited due to poor public access into the area.

Very little inventory has been done in this area however, models suggest that it is likely to contain prehistoric sites.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Developments in the FMU include the Federal Aviation Administrations (FAA) Doplar radar facility, the central link for the Utah Communication Area Network (UCAN) facility an emergency communication system for interagency Law Enforcement and federal, state, and local governments, another radio communication facility, and a microwave facility. U.S. Interstate 84 and 2 Chevron product pipelines cross through the FMU. Other improvements include scattered ranches and associated structures, as well as various range improvements.

Fire History



From 1994 to 2003, 86 fires have occurred within the FMU, for a total of 52,880 acres. Lightning-caused fires account for about 75% of all ignitions; the remainder has been reported as human-caused. The greatest proportion of human-caused fires is due to equipment use. Primarily, fires have been reported from June through November. Half of all fires reported in this FMU are suppressed at 10 acres (or less). On the average, it is expected that 2 fires will exceed 300 acres each year in this FMU; one will likely exceed 1000 acres.

Wildland fire behavior is best predicted by Fuel Model 2 in the areas where sagebrush with a grass understory is common. Where cheatgrass is more dominant, fire behavior can be best characterized by Fuel Model 1. In some cases where juniper is present, fire behavior would be predicted by Fuel Model 2. Rates of spread in this light to moderate fuel complex are moderate to extreme. On the Promontory Mountains, the effect of the lake can have a significant influence on fire behavior. The local wind conditions during hot summer afternoons can be intensified by lake breezes that combined with prevailing general winds near the ridges, results in extremely erratic and intense fire behavior.

Fire Regime/Condition Class

FMU A18 only contains the Wyoming big sagebrush PNVG and it falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, the Wyoming big sagebrush PNVG is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested Wyoming big	95	3	3	1	Wyoming big sagebrush	No current target

sagebrush						

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: riparian (2%), salt desert shrub (3%).

Values at Risk
Values to be protected include year round habitat for mule deer and pronghorn. Adjacent farmlands may be additionally at risk. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This unit includes scattered ranches and associated structures, as well as various range improvements. Other developments in the unit include the Federal Aviation Administrations (FAA) Doppler radar site. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit and as communities are defined. Twenty-five percent of fires in this unit are human-caused.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of

impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.

- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, and juniper sites, they receive a little more moisture than the desert component, ranging from 8 to 12 inches of annual rainfall. Loss of shrub species due to fire, invasive plants, especially cheatgrass are a threat. Knapweed also invades these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component. Loss soil from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation. Loss of wildlife habitat is a major concern in these sites. Due to the close proximity of these components to the major population, recreation uses are also common.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.

Community Protection/Community Assistance Objectives

- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Post Fire Rehabilitation and/or Restoration Objectives

These sites represent the areas of salt shrub, sagebrush/grass, juniper, and subalpine tundra. They receive a little more moisture than the desert component. 1) Prevent the Loss of shrub species due to fire, invasive plants, especially cheatgrass, 2) Prevent, control, and attempt to eradicate noxious weed species and invader species, such as knapweed and dyers woad. These species invade these sites in much of the fire management units. Many areas within this component respond to rehabilitation because of the annual moisture, and better soils than the desert component, 3) Prevention of soil loss from erosion is an issue of concern on these sites due to topography and areas that may have steep slopes, 4) Stabilize drainages and gullies on burned sites. Development of raw gullies are a common problem on many of these burned sites, especially without any rehabilitation, and 5) Enhance and aid in restoration of wildlife habitat.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from

spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the decadal burn target has been reached at 2,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU A19 Antelope Island Area

Location Description

A19 is Antelope Island in Davis County and is surrounded on all sides by the waters of the Great Salt Lake.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU A19 Antelope Island Area	324	27,483				

Characteristics
Annual precipitation averages 18 to 20 inches, slopes are generally 26 to 60%, and elevation is 4,500-6,000 feet above sea level. The major ecological sites are Desert Stony Loam, Semi-Desert Stony Loam, and Upland Stony Loam with gravels in the soil.

All of A19 in Davis County is a nonattainment area.

The dominate vegetation type on these six isolated parcels of BLM land is needle-and-thread grass and cheatgrass. This is due to past fire occurrence which has converted native desert and semi-desert species to monotypic stands of cheatgrass. Other plant species occur on the units that include juniper, bitterbrush, low rabbitbrush, snakeweed, and bluebunch wheatgrass. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

The BLM lands within this unit are managed as if part of the Antelope Island State Park. As a State Park, this area receives high levels of recreational use consisting of sightseeing, mountain bike riding, hiking, and bison hunting.

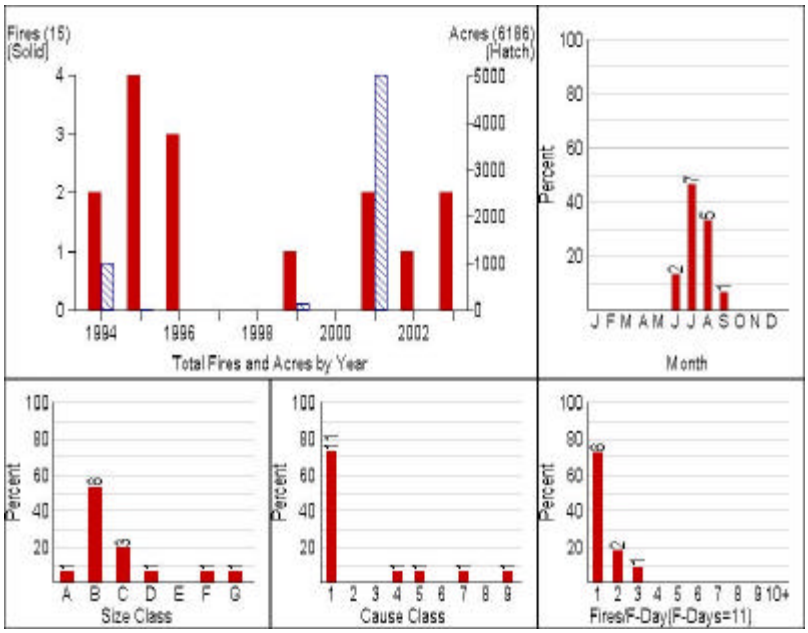
The BLM lands, and surrounding areas, provide habitat for bison, mule deer, pronghorn, and Rocky Mountain bighorn sheep. This area is also excellent habitat for chukar. The area is utilized by several raptor species, including the burrowing owl, a BLM, Utah State Sensitive Species.

The oldest occupied non-aboriginal structure in Utah is the Fielding Garr Ranch at the south end of Antelope Island. There are also Fremont prehistoric sites on the island. No significant cultural or historical concerns have been identified in this unit on BLM administered lands.

This FMU in Davis County has the potential to contain Bald Eagle[1,3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Black-footed Ferret[6] (*Mustela nigripes*) E, Canada Lynx (*Lynx canadensis*) T, and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) E.

The Antelope Island State Park and associated Visitors Center are located in the northwest portion of the FMU. Other developments include the structures within the Garr Ranch area on the east side of the island.

Fire History
From 1994 to 2003, 15 fires have occurred within the FMU, for a total of 6,186 acres. Lightning-caused fires account for about 73% of all ignitions; the remainder has been reported as human-caused. Typically, fires have been reported from June through September.



Wildland fire in this unit is best predicted by Fuel Model 1. The effect of the lake can have a significant influence on fire behavior. The local wind conditions during hot summer afternoons can be intensified by lake breezes, combined with prevailing general winds near the ridges, results in extremely erratic and intense fire behavior.

Fire Regime/Condition Class

FMU A19 contains two PNVG's. The salt desert shrub PNVG occupies 74% of the land and falls in fire regime 5 and condition class 3. The Wyoming big sagebrush PNVG occupies 26% of the FMU and falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	84	5	3	1	salt desert shrub	No current target
Wyoming big sagebrush with tree encroachment	16	3	3	1	Wyoming big sagebrush	No current target

Values at Risk

Values to be protected in this unit include the State Park facilities and improvements, recreation opportunities, habitat for bison, mule deer, pronghorn, and Rocky Mountain bighorn sheep. Also to be protected is habitat for the burrowing owl. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk

The Antelope Island State Park Facilities are located in this unit and include developments such as ranger housing, visitor center, and the structures within the Garr Ranch area on the east side of the island. The developments and residences on this island have been identified by the Northern Utah Fuels Committee as at risk from wildfire. Twenty-seven percent of fires are human-caused.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass. Maintain or improve the health of the Sagebrush Steppe ecotype.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments would be conducted during seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The sites in this component represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 3,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix G for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU A20 East Curlew Valley, Hansel Valley, & Blue Creek Valley Areas

Location Description
A20 is located in eastern Box Elder County. It is composed of the valley and lowlands between the Northern Promontory and Hansel Mountains. It consists mainly of agricultural lands abutting BLM.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	
FMU A20 East Curlew Valley, Hansel Valley, & Blue Creek Valley Areas	4,815	3,097			2,250	375,308	110

Characteristics
Annual precipitation averages 7 to 9 inches, slopes are generally 5 to 30%, and elevation is 4,500-5,000 feet above sea level. Major ecological sites are Desert and Semi-Desert Shallow Loam, Gravelly Loam, Alkali Bench, Loam, and Alkali Loam.

The primary vegetation in this unit is big sagebrush, black sagebrush, greasewood, shadscale, rabbitbrush, snakeweed, Indian ricegrass, squirreltail, and blue grass. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. Portions of the private lands within the unit have been converted from natural vegetation into winter wheat and other agricultural crops.

The unit provides habitat for pronghorn and mule deer. In addition, this unit provides important habitat for sharp-tailed grouse, sage grouse, chukar, and Hungarian partridge. Historically, the kit fox inhabited this unit. The area is also important for a variety of raptors including the ferruginous and Swainson's hawks, and the burrowing owl, all BLM, Utah, State Sensitive Species.

The BLM, Utah, State Sensitive species Passey onion (*Allium passeyi*) occurs within Golden Spike National Monument and possibly occurs within the Central Pacific Railroad Grade Area of Critical Environmental Concern.

General dispersed recreation occurs in this area and consists of OHV use, camping, mountain biking, and hunting. Recreation use is much higher in the area near the Central Pacific Railroad Grade, designated the Transcontinental National Back Country Byway, and located in the southern portion of the unit.

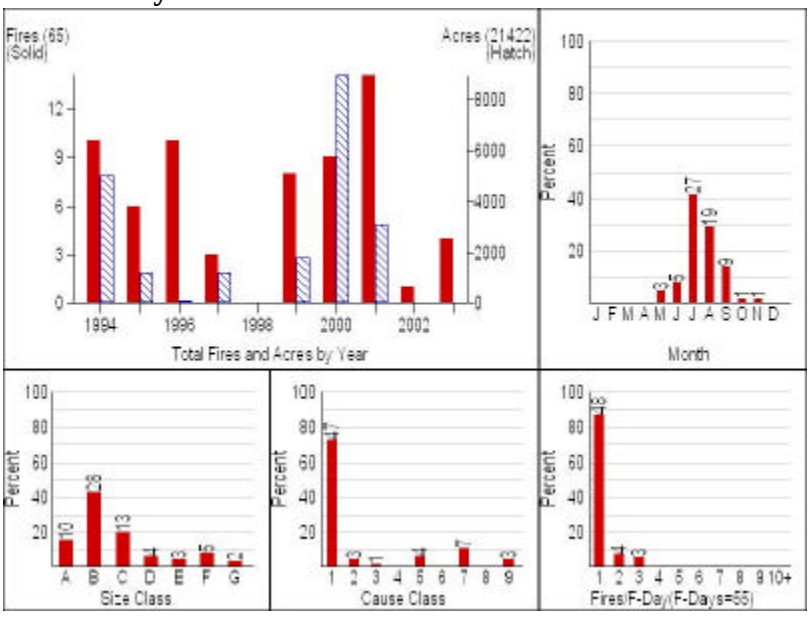
Most of the private lands are grazed in this unit and could be grazed at any time of year in any given area. On BLM administered lands cattle grazing occurs November 15 through May 16, and sheep grazing occurs January 1 through February 22.

Cultural resources in this unit include the Central Pacific Transcontinental Railroad Grade (Area of Critical Environmental Concern) and associated sites and clusters of prehistoric sites near springs. The Bidwell-Bartleson Trail passes through a portion of this unit. Protection concerns include the wood trestles and culverts, sidings, and stations along the railroad grade. The Union Pacific Railroad Grade is also in this unit. Clusters of prehistoric sites have been identified at several locations. Some of the oldest known sites in the district occur in this unit. Historic trails in this unit include portions of the Bartleson-Bidwell Trail and the Henley or Salt Lake Cutoff.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

There are scattered ranches throughout the FMU, U.S. Interstate 84, a 138 kv power transmission line, 2 Chevron product pipelines, Thiokol Rocket manufacturing and Testing facilities, and Golden Spike National Monument and associated facilities.

Fire History



From 1994 to 2003, 65 fires have occurred within the FMU, for a total of 21,422 acres. Lightning-caused fires account for about 72% of all ignitions; the remainder has been reported as human-caused. The greatest proportion of human-caused fires is due to arson and debris burning. Primarily, fires have been reported from May through September. Most fires in this FMU are suppressed at 10 acres (or less). On the average, it is expected that 1 fire will exceed 300 acres each year in this FMU.

Wildland fire behavior where big sagebrush dominates the area is best predicted by Fuel Model 6. In some small areas of concentrated desert shrub species Fuel Model 2 may be a better predictor of wildland fire behavior. Rates of spread in these fuels can be moderate. Typically, areas with heavy concentrations of perennial grasses will not result in high spread rates and fire intensities unless fuel moisture is extremely low during periods of drought. Sites converted to winter wheat and other agricultural crops are not well represented in the Fire Behavior Prediction

System fuel models, except during very extreme conditions, in which case Fuel Model 1 or 3 may represent the fire behavior depending upon fuel loading.

Fire Regime/Condition Class
Fire regime and condition class was not developed for this FMU because the unit is dominated by agricultural and commercial/residential developments. The burnable wildland vegetation only comprised an extremely small percentage (1.3%) of the entire FMU and did not match the criteria needed to make an accurate assessment of fire regime and condition class for the FMU.

Values at Risk
Primary values to be protected in this unit include the habitat for the pronghorn, mule deer, sharp-tailed grouse, sage grouse, and kit fox. It is also important to protect habitat for a variety of raptors including the ferruginous and Swainson's hawks and the burrowing owl. In addition, the Passey onion (*Allium passeyi*), rangelands and range improvements are at risk. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Snowville, Promontory and Thatcher-Penrose have been identified by the Northern Utah Fuels Committee as communities at risk. There are also scattered ranches throughout the unit. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit. Almost 30% of fires are human-caused in this unit.

Fire Management Objectives
- Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
- Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
- Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General

application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.

- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

The areas in this unit represent harsh/dry sites due to alkali soils or dry sites along with the elevation. These sites are very sensitive and are being overtaken by invasive species (such as halogeton or cheatgrass). Loss of the shrub component on these sites due to fire cannot be easily restored. ESR techniques applied on these sites would accomplish two main objectives: 1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 3,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education objectives and strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU A21a	**Wasatch Front**
FMU A21b	**Cache Valley South Area**
FMU A21c	**Cache Valley North Area**

Location Description

A21a is composed of urban areas along the I-15 corridor, which runs north south from Brigham City to Payson. This FMU contains most of the major urban centers located in the field office including Salt Lake, Provo, Ogden, and Bountiful.

A21b is located in Cache County and is composed mainly of private ground that includes the town of Logan.

A21c is located along the eastern edge of Box Elder County where it juxtaposes Cache County. It is composed of the valley that the town of Garland resides in.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU A21a Wasatch Front	1,756	19,167	455				20

FMU A21b Cache Valley South Area		3,035	87			117,113	
FMU 21c Cache Valley North Area	141	36				38,272	

Characteristics
Annual precipitation averages 12 to 20 inches, slopes are generally 5 to 30%, A21a elevation is 4,500-5,500 A21b is 4,500-5,500, and A21c is 4,500-5,000 feet above sea level. Major ecological sites are Semi-Desert Shallow Loam, Gravelly Loam, Upland Gravelly Loam, Alkali Bench, Loam, and Alkali Loam.

The primary vegetation in this unit is agricultural crops, native meadow grasses, and a variety of cultivated trees, shrubs, and grasses in the urban areas.

This unit includes significant mule deer and elk winter ranges. The unit is also important habitat for chukar, ring-necked pheasant, and quail, as well as a variety of passerine birds.

Several major riparian habitats occur within this unit along with associated fisheries.

The upper elevations of the unit have dispersed recreation; the remainder of the unit has high recreation use. A portion of the Pony Express/Overland Stage Route, designated as a National Back Country Byway, passes through this unit.

There is not sufficient information to characterize the cultural resources in this unit at this time. However, the pony Express/Overland Stage Route passes though a portion of this unit and it is likely to contain both prehistoric sites and substantial numbers of other significant historic resources.

This FMU in Cache County has the potential to contain Maguire Primrose (*Primula maguirei*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Canada Lynx (*Lynx canadensis*) T, Black-footed Ferret[6] (*Mustela nigripes*) E.

This FMU in Davis County has the potential to contain Bald Eagle[1,3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Black-footed Ferret[6] (*Mustela nigripes*) E, Canada Lynx (*Lynx canadensis*) T, Black-footed Ferret[6] (*Mustela nigripes*) E, and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) E.

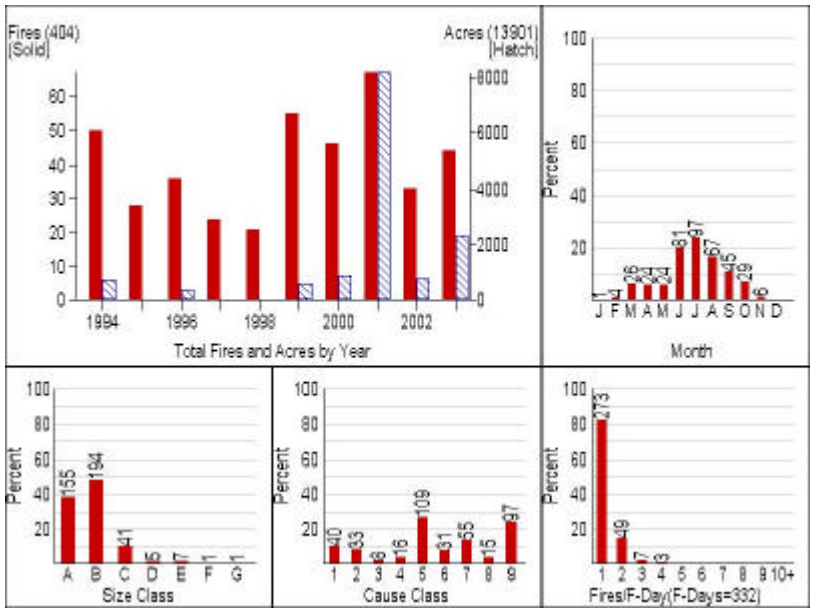
This FMU in Salt Lake County has the potential to contain Slender Moonwort (*Botrychium lineare*) C, Ute Ladies'-tresses (*Spiranthes diluvialis*) T, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[1,3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*) T.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU in Weber County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Ogden Rocky Mountainsnail (*Oreohelix peripherica wasatchensis*) C, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*).

This is the most developed FMU within the Salt Lake Field Office and contains many small towns and communities as well as the majority of the major cities in Utah. Approximately 75% of the population of Utah lives in this FMU. Many commercial businesses, small industries, and large industries are headquartered in this FMU most noteworthy of these are Hill Air Force Base, 4 oil refineries in North Salt Lake, Delta Airlines, Salt Lake International Airport, U.S. Interstate Routes 15, 215, and 80, and the major Union Pacific Railroad hubs at Ogden and Salt Lake City.

Fire History



From 1994 to 2003, 404 fires have occurred within the FMU, for a total of 13,901 acres. Lightning-caused fires account for only 10% of all ignitions. The vast majority of fires in this FMU have been reported as human-caused; primarily, debris burning (109 fires) and arson (55 fires). Fires are reported year-round; however, the most active months are from June through October. Approximately 86% of fires in this FMU are suppressed at 10 acres (or less). On the average, it is expected that 1 fire will exceed 300 acres each year in this FMU.

Wildland fire behavior in the Wasatch Front urban interface within the undeveloped landscape can be variable due to the diversity of vegetation and topography. However, areas along the Front that have high densities of oak brush are best predicted with Fuel Model 5; however, these areas under extreme fuel and weather conditions exhibit intense fire behavior and are best predicted with Fuel Model 4. Areas dominated with Juniper and/or sage fit Fuel Model 6. Along the Wasatch front mountains, steepness of the terrain will significantly increase fire spread and intensity. Fire occurrence in this unit is high and has a relatively high probability of human-caused ignitions due to the population density.

Fire Regime/Condition Class
Fire regime and condition class was not developed for this FMU due to the fact that the unit is dominated by commercial/residential developments in the Salt Lake City metropolitan area. The burnable wildland vegetation only comprised an extremely small percentage (less than 1%) of the entire FMU and did not match the criteria needed to make an accurate assessment of fire regime and condition class for the FMU.

Values at Risk
Values to be protected in this unit include mule deer and elk winter ranges, habitat for the ring-necked pheasant, and rangelands, range improvements, riparian areas, and fisheries. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This is the most developed unit within the district and contains many small towns and communities as well as major cities. The following lists communities within this unit that were published in the August 2001 Federal Register:

Alpine	Genola	Ogden Canyon
Alta	Harrisville	Olympus Cove
American Fork	Highland	Orem
American Fork Canyon	Hobble Creek	Pleasant Grove
Avon	Holladay	Provo
Bear River NWR HQ/Facilities	Hyrum East	Powder Mountain
Big Cottonwood	Kaysville	Salt Lake City
Bountiful	Layton	Sandy
Brigham- Collingston Bench	Liberty	Santaquin
Brigham- Willard Bench	Lindon	Saratoga Springs
Brighton	Little Cottonwood	South Canyon-Avon
Cedar Hills	Logan	South Fork-Huntsville
Centerville	Logan Canyon	South Ogden Bench
Dimple Dell	Maple Canyon-Huntsville	South Weber
Draper	Mapleton	Springdell
Eden	Mountain Green	Springville
Elk Ridge	North Ogden Bench	Tibble Fork
Emigration Canyon	North Salt Lake	Vivian Park
Farmington	Ogden	Woodland Hills

The following communities have been identified by the Northern Utah Fuels Committee as at risk from wildfire:

Bluffdale	Millville	Providence
Herriman	Nibley	River Heights
High Country Estates	Paradise	Smithfield
Hyrum	Payson	Thatcher
Lamb's Canyon	Perry /Willard	Washakie
Logan Cove	Plymouth	Wellsville
Goshen	Portage	

Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit. Ninety-percent of fires in this unit are human-caused.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control, l and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland

game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Community Protection/Community Assistance Objectives

- In cooperation with state and county officials and local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire departments to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 300 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Post Fire Rehabilitation and/or Restoration Objectives

1) Stabilize and prevent future occurrence of wildfire and restore ground cover to prevent loss of topsoil, 2) The second objective would be to rehabilitate the unit to a desired range, creating vegetative diversity with native species of perennial grasses, forbs, and shrubs. Restoration would continue after three years with funding being supported by the appropriate resource.

Due to the urban proximity, “use stabilization and rehabilitation techniques” could be used to educate and teach the observating public for better public relations.

Community Protection/Community Assistance Strategies
Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B01 Deep Creek Valley & Clifton Flat Area

Location Description
B01 is in the southwestern corner of Tooele County and is composed of lowlands on the western side of the Deep Creek Mountains. The Goshute Indian Reservation is located within this FMU.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU B01 Deep Creek Valley & Clifton Flat Area	60,281	4,658			1,201	3,635

Characteristics
Annual precipitation averages 7 to 16 inches, slopes are generally 2 to 30%, and elevation is 5,500-6,000 feet above sea level. Ecological sites are mainly Semi-Desert Loam, Upland Loams, Shallow Loams, Shallow Gravelly Loams, Stony Loams, Shallow Hardpans, Sandy Loams and Alkali Loam.

Vegetation in this unit is dominated by big sagebrush, black sagebrush, greasewood, shadscale, and scattered juniper and pinyon over much of the area, with denser stands of the trees in the upper elevations of the unit, especially in the foothills along the west side of the Deep Creek Mountains. Grasses include squirreltail, bluegrass, and cheatgrass. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Year round pronghorn habitat exists within this unit as well as crucial mule deer winter range. The southern portion of the unit is important sage grouse habitat which includes strutting grounds, nesting habitat, and brood rearing areas. Several raptor species inhabit the unit including the ferruginous hawk and burrowing owl (both BLM, Utah, State Sensitive Species)

and scattered raptor nests are found throughout this unit. The area is also an important woodland and pine nut gathering area.

A small portion of the Deep Creeks WSA/Special Recreation Management Area (SRMA) is found in the unit. Non-WSA lands determined to have wilderness characteristics by the BLM are in this unit. Dispersed recreation use occurs in the Deep Creek Mountains with increased use during the summer related to sightseeing, hiking, off-highway vehicle use, and camping. During the fall there is an increase in use during the various hunting seasons.

In general, dispersed recreation occurs in this area with increased use during the summer with hiking and sightseeing as well as in the fall during the various hunting seasons. Portions of the upper elevations of this unit are also popular for gathering pine nuts. High recreation use is also associated with the Pony Express/Overland Stage Route, which has been designated a National Historic Trail and BLM National Back Country Byway.

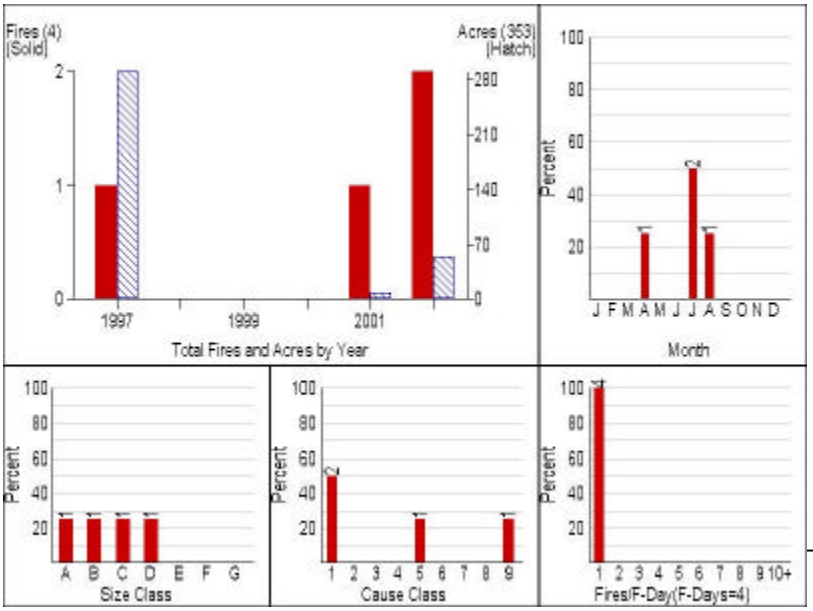
The area is used for both winter (November 1 though April 30) and summer (April 1 through September 15) cattle range. The Clifton Flats area also has winter sheep use during the period of November 1 through April 30.

Cultural resources in this unit include the Pony Express/Overland Stage Route and the Burnt Station Pony Express site. Prehistoric sites exist in the Deep Creek Valley.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

The community of Ibapah is found in the this FMU as well as isolated ranches in the southern portion of the FMU. The Goshute Indian Reservation, and associated residences and business offices, are located just south of the FMU. Other developments include range improvements such as fences and water developments, as well as distribution power lines.

Fire History



From 1994 to 2003, 4 fires have occurred within the FMU, for a total of 353 acres. Half of these fires were human-caused. Wildland fires have been reported in April (1), June (2), and August (1). Each of the four fires was suppressed at less than 300 acres.
Wildland fire behavior in this unit is best predicted by Fuel Model 6. Rates of spread in the unit are moderate. Fire occurrence is low. Both

lightning and human caused fires have occurred in the unit.

Fire Regime/Condition Class
FMU B1 only contains the Wyoming big sagebrush PNVG and it falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, the Wyoming big sagebrush PNVG is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested Wyoming big sagebrush	96	3	3	1	Wyoming big sagebrush	800

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: salt desert shrub (4%).

Values at Risk
Primary values to be protected include year-round pronghorn habitat, crucial mule deer winter range, important sage grouse habitat, raptor habitat, including the ferruginous hawk and burrowing owl, and rangelands and range improvements. The area is also an important woodland and pine nut gathering area. The cultural values described under the Characteristics section of this unit are at risk. The wilderness values within the Deep Creek Mountains are at risk.

Communities at Risk
Ibapah is a Community at Risk published in the Federal Register. In addition, there are isolated ranches in the southern portion of the unit. The Goshute Indian Reservation, and associated residences and business offices, are located just south of the unit in the Fillmore Field Office and Nevada. Other developments include range improvements such as fences and water developments, as well as power lines. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, J) guidelines for lands within the boundaries of the Deep Creek Mountains Wilderness Study Area (WSA).

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C) guidelines for lands within the boundaries of the Deep Creek Mountains Wilderness Study Area (WSA).

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occupying these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these sites are: 1) Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas, 2) Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc.

Objectives for these sites are. 1) Watershed protection from erosion and loss of topsoil, 2) Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description, 3) Prevent loss of habitat that has an impact on T&E speciesand supports other wildlife such as mule deer, raptors, antelope and sage grouse, 4) Protect and prevent the loss of cultural resources in these areas.

Rehabilitation and/or restoration actions within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) will adhere to guidelines outlined in Handbook H-1742-1.

Community Protection/Community Assistance Objectives

- In cooperation with tribal leader, state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 1,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.
- Adhere to the following guidelines for lands within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA), according to the Interim Management Policy for Lands Under Wilderness Review (H-8550-1):
    - Minimum impact suppression tactics will be used (refer to the Incident Response Pocket Guide, NFES #1077). This does not preclude the use of power tools, aircraft, and motorized firefighting equipment, but minimum impact techniques should be used in association with all suppression tactics.
    - All uses of earth moving equipment within the WSA require authorization.
    - Priority for placement of large fire camps should be outside the WSA.
    - Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in the WSA before developing the Escaped Fire Situation Analysis.

- Use of motorized vehicles and mechanical equipment during mop-up should be minimized.
- Efforts should be made to rehabilitate any impacts created by suppression activities prior to releasing fire crews and associated equipment following fire containment.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B1 by treatment and vegetation type:

Treatment Type	cheatgrass infested Wyoming big sagebrush with juniper encroachment
Mechanical	1000
Seeding	1000

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire also may be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.
- The following guidelines will be implemented on lands within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C).
    - Prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems.
    - Prescribed fire and vegetation manipulation activities in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.
    - No chemical, mechanical, or biological means of treatment will be allowed in the WSA.
    - Hand or aerial seeding is permitted within the WSA to restore natural vegetation. The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community

development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention and suppression capabilities.

FMU B02 Lower Pilot Mountain Bench Area

Location Description
B02 is split in two by Tooele and Box Elder counties, yet most of the FMU lies in Box Elder. The FMU contains the lower contours of the Pilot Mountain range found on the western edge of the field office along the Utah Nevada border.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU B02 Lower Pilot Mountain Bench Area	18,313	1,527				8,433

Characteristics
Annual precipitation averages 7 to 9 inches, slopes are generally 0 to 10%, and elevation is 4,500-5,000 feet abovesea level. Major ecological sites include Desert and Semi-Desert Gravelly Loam, Shallow Loam, Gravelly Sandy Loam, Shallow Hardpan, Flat, Alkali Bench, Alkali Flat, and Silt Loam.

Dominant vegetation in this unit is primarily desert shrub species including shadscale, low sagebrush, black sagebrush, big sagebrush, greasewood, rabbitbrush, bud sagebrush, ephedra, horsebrush, and snakeweed. In addition, juniper and pinyon are found in the unit with an understory of Indian ricegrass and other perennial and annual grasses. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This area provides important mule deer and elk winter range as well as year round antelope use. Chukar use is also common in this unit. This unit provides important sage grouse habitat for strutting grounds, nesting, and brood rearing areas. Ferruginous and Swainson's hawks, and burrowing owl, all BLM, Utah, State Sensitive Species, as well as other raptor species, use the unit. The kit fox, also a species of concern, utilize portions of this unit.

This unit includes non-WSA lands determined to have wilderness character by the BLM.

In general, dispersed recreation occurs in this area, with increased use during the summer with hiking, camping, and sightseeing, as well as in the fall during the various hunting seasons.

This area is grazed by cattle May 10 through March 31, and by sheep January 1 through March 28.

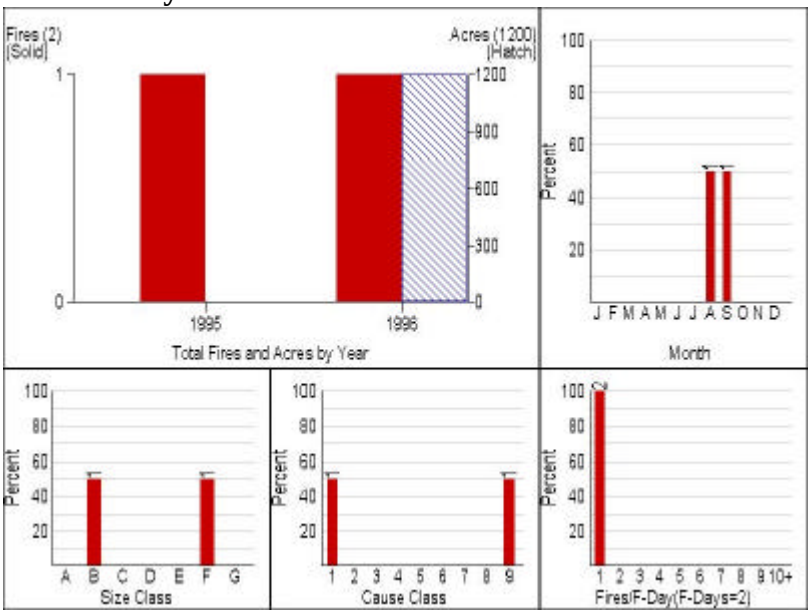
Cultural resources in this unit include the Bartleson-Bidwell Trail and portions of the California National Historic Trail's Hasting's Cutoff. Prehistoric sites are known to occur in several areas in this unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU includes the Doudy Ranch as well as the TL Bar Ranch. There are several rangeland improvements in this FMU such as fences, guzzlers, and spring developments.

Fire History



From 1994 to 2003, only 2 fires have been reported within the FMU, for a total of 1200 acres. One fire was human-caused; the other lightning-caused. Wildland fire behavior in this unit is best predicted by Fuel Model 2 at lower elevations where desert shrub species are prevalent. Rates of spread in the unit are moderate. Fire occurrence is extremely low.

Fire Regime/Condition Class

FMU B02 only contains the salt desert shrub PNVG and it falls in fire regime V and condition class 3. Due to the invasion of cheatgrass within the FMU, the salt desert shrub PNVG is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	90	5	3	1	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: sagebrush (2%), grassland (8%).

Values at Risk
Primary values to be protected are the desert shrub plant community, rangelands, range improvements, mule deer and elk winter range, year round antelope habitat. Also of high importance is habitat for the sage grouse, ferruginous and Swainson's hawks, burrowing owl, as well as other raptor species, and the kit fox. The cultural values described under the Characteristics section of this unit are at risk, including the interpretive kiosk at Donner Spring on the TL Bar Ranch, which was a cooperative project between the ranch, BLM, and the Crossroads Chapter of the Oregon California Trails Association (OCTA).

Communities at Risk
This unit includes the Doudy Ranch and the TL Bar Ranch that have both been identified by the Northern Utah Fuels Committee as at risk from wildfire. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit. There are several rangeland improvements in this unit such as fences, guzzlers, and spring developments. One human-caused fire occurred in this unit from 1994-2003.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.

- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these sites:

1. Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas.
2. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc.,
3. Cultural issues occur on these sites, due to their topography and ecological type.
4. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors.
5. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites:

1. Watershed protection from erosion and loss of topsoil
2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description
3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse.
4. Protect and prevent the loss of cultural resources in these areas.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or

use of indigenous animals are used at times. The area would be reseeded with native as well as introduced vegetative species to assure diversity, as well as emergency establishment.

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these sites are: 1. Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. 2. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., 3. Cultural issues occur on these sites, due to their topography and ecological type. 4. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the Bald Eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites:
1. Watershed protection from erosion and loss of topsoil.
2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description.
3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse.
4. Protect and prevent the loss of cultural resources in these areas.

Community Protection/Community Assistance Objectives
- In cooperation with tribal leader, state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education, and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies
Suppression
- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90 % of the time at all FILs. The annual target for

acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 1,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- No target acreages are currently identified for FMU B02.
- Prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire would be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

The closest fire department is located in Wendover. Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B03a Raft River Mountain Areas
FMU B03b Grouse Creek

Location Description

B03a is in Box Elder County along the Sawtooth National forest boundary. It encompasses a section of the Raft River Mountains that contains state, private, and BLM grounds.

B03b is in Box Elder County and is composed of the upper elevations of the Grouse Creek Mountains.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres
FMU B03a Raft River Mountain Areas	4,064	3,125				25,402
B03b Grouse Creek	34,200	3,873				73,123

Characteristics
Annual precipitation averages 10 to 20 inches, slopes are 2 to 50% B03a elevation is 6,000-9,500, and B03b is 6,500-8,000 feet above sea level. Ecological sites are mainly Upland and Mountain Loam, Gravelly Loam, Shallow Loam, Shallow Gravelly Ridge, Stony Loam, Juniper Savana, Windswept Ridge, Mahogany Thicket, and Aspen Thicket. The northern end of this unit is within the Columbia River Ecoregion

Vegetation in this unit is mainly big sagebrush, black sagebrush, bitterbrush, mountain mahogany, serviceberry, pinyon, and juniper with a mixed understory of bluebunch wheatgrass, cheatgrass, and various forbs. Douglas fir, white fir, and quaking aspen, are found on north facing aspects and drainage bottoms. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit provides crucial deer winter range and marginal year round habitat. The area is also utilized by the Grouse Creek elk herd throughout the year. Sage grouse strutting grounds, nesting habitat and brood rearing areas are scattered throughout the unit. The bald eagle, a threatened species, inhabits this unit in the winter, and utilizes the area for foraging and roosting.

There are a few perennial streams in the unit, which are inhabited by several different fish species.

In general, dispersed recreation occurs in this area with increased use during the summer with hiking, sightseeing, and off-highway vehicle use, as well as in the fall during the various hunting seasons.

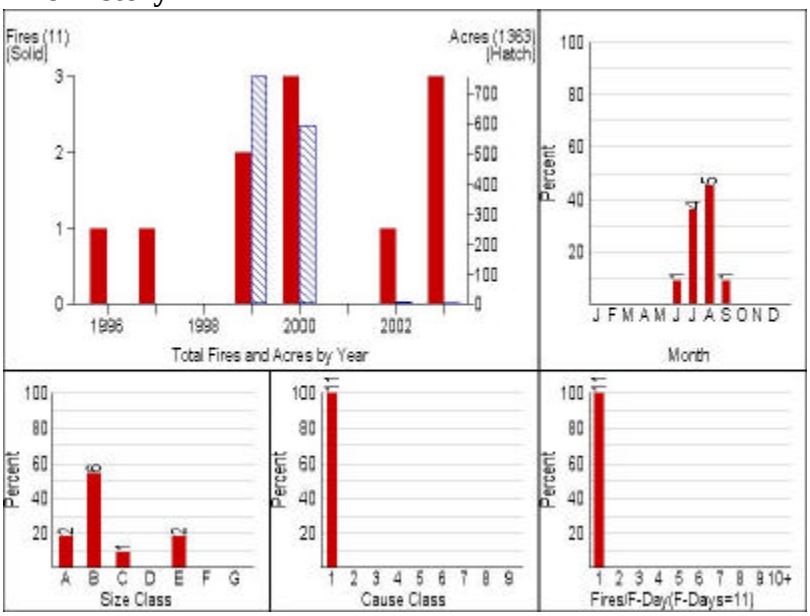
This unit is grazed by cattle May 1 through September 30, and by sheep December 1 through March 31.

This unit contains the highest densities of prehistoric sites reported within the Salt Lake Field Office. Care should be taken to protect significant sites from fire and suppression operations. Historic structures on BLM managed lands should also be protected.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Isolated ranch improvements may exist on adjacent properties as well as rangeland improvements. Other developments include several stone quarries, Windy Peak communications facility, 138 kv power transmission line, historic mining structures, and a microwave tower near Lynn Pass.

Fire History



From 1994 to 2003, 11 fires have occurred within the FMU, for a total of 1363 acres. All of these fire were lighting-caused from June through September. Approximately 73% of fires in this FMU are suppressed at 10 acres (or less).
Wildland fire behavior, in the dense sagebrush and mixed brush areas of this unit, is best predicted by Fuel Model 6. Higher elevations with Douglas fir, white fir, and quaking aspen, would fit Fuel Model 8. Rates of spread are moderate. Fire occurrence is low. Lightning has been the main source of ignition.

Fire Regime/Condition Class

FMU B03 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 86% of the FMU and falls in fire regime III and condition class 3. The juniper-pinion frequent fire PNVG occupies 14% of the land and falls in fire regime I and condition class 2. Due to the invasion of cheatgrass within the FMU, both PNVG's are at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed (%)
pinyon-juniper	21	1	2	1	pinyon-juniper	200
Wyoming big sagebrush with tree encroachment	69	3	3	1	Wyoming big sagebrush	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: grassland (6%), mixed conifer (2%), riparian (1%), salt desert shrub (1%).

Values at Risk
Values to be protected include crucial deer winter range and year round habitat, habitat for elk, sage grouse, and bald eagle, streams, rangelands, and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk currently identified in this unit that are listed in the Federal Register. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Isolated ranch improvements may exist on adjacent properties as well as rangeland improvements such as spring developments, fences, corrals, etc.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives
These components consist of Non-Wetland sites dominated by desert shrubs and annual grass in the lower elevations to upper elevations of scattered juniper, aspen, lodgepole pine, Douglas fir, and snowberry. On the north end includes cropland areas of wetland private pasture near the local community of Randolph.
Issues of concern are: Loss of Desert shrub communities due to fire, Invasive species of noxious and invasive weeds, juniper invasion on scattered sites, livestock displacement, loss of habitat for wildlife and T&E species, and potential loss of cultural resources due to fire, and loss of cover. Objectives associated with these sites are 1. Prevent loss and improve watershed values. 2. Prevent loss of native species, especially the shrub component, as defined in the ecological range site description. 3. Prevent and improve habitat for wildlife and T&E species. 4. Improve plant species diversity ratio as defined in the ecological range site description. Provide and prevent loss of cultural resources as a result of emergency fire suppression and stabilization efforts.

These sites include areas of topography that are steep and not suitable for mechanical seed application, however there are many sites that treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation techniques that historically have been successful in this component include mechanical treatments, chaining, aerial seeding, drill and seed, and hand planting of shrubs.

Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseeded with native as well as introduced vegetative species to assure diversity, as well as emergency establishment. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.

Community Protection/Community Assistance Objectives
- Refer to the Fire Prevention Plan in Appendix B for general wildland fire education objectives.

Fire Management Strategies
Suppression
- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The

annual target for acreage burned within this FMU is less than 1,000 acres. Once the decadal burn target has been reached at 1,500 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B03 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment
Mechanical	200
Seeding	200

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for general wildland fire education strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU B04 Semi-Desert and Upland Areas of NW Box Elder County

Location Description

B04 is in Box Elder County and consists of the valley floors and lowlands in the Northwest corner of the County. The FMU includes the towns of Grouse Creek, Park Valley, Rosette, and Etna.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B04 Semi-Desert and Upland Areas of NW	184,832	26,404				271,656	

Box Elder County							

Characteristics
Annual precipitation averages 10 to 16 inches, slopes are 0 to 25%, and elevation is 6,00-8,000. Ecological sites are mainly Semi-Desert and Upland Loams, Shallow Loams, Shallow Gravelly Loams, and Stony Loams and Clays. On the southern edge of this zone there is also Desert Flat, Desert Loam, and Desert Shallow Loam. The northern portion of this unit is within the Columbia River Ecoregion.

Vegetation in this unit is mainly juniper, big sagebrush, black sagebrush, bitterbrush, rabbitbrush, mountain mahogany, and serviceberry, and spiny hopsage, with a mixed understory of bluebunch wheatgrass, cheatgrass, and various forbs. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

These areas provide crucial deer winter range, important elk year round habitat, and year round pronghorn habitat in the lower elevations of the unit. Sage grouse strutting grounds, nesting habitat, and brood rearing areas are scattered throughout this unit. Chukar and Hungarian partridge inhabit the area. The, bald eagle, a threatened species, utilizes the area for foraging and roosting, and this area is important to a variety of other raptors.

Several perennial and intermittent streams occur in the unit which provide habitat for a variety of fish species.

BLM, Utah, State Sensitive plant species which occur in this unit include the Goose Creek milkvetch (*Astragalus anserinus*) and the Idaho Penstemon (*Penstemon idahoensis*) which both occur within the Goose Creek area of this unit.

BLM, Utah, State Sensitive plant species *Arabis falcatoria* has been located on private land near Lynn. Potential exists for the plant to occur on nearby areas of BLM administered lands. Within the northern portion of this area, near Raft River Narrows, the Single-leaf Pinyon Pine occurs. This is an outlier species for this far north.

In general, dispersed recreation occurs in this area with increased use during the summer with hiking, sightseeing, camping, and off-highway vehicle use, as well as in the fall during the various hunting seasons. On the south side of the unit, Devils Playground receives a high amount of hiking, rock climbing, camping, off-highway vehicle use spring through fall.

Portions of this unit are grazed by cattle year round. Sheep grazing occurs during the period of December 1 through April 27, and horses graze the unit November 1 through April 30.

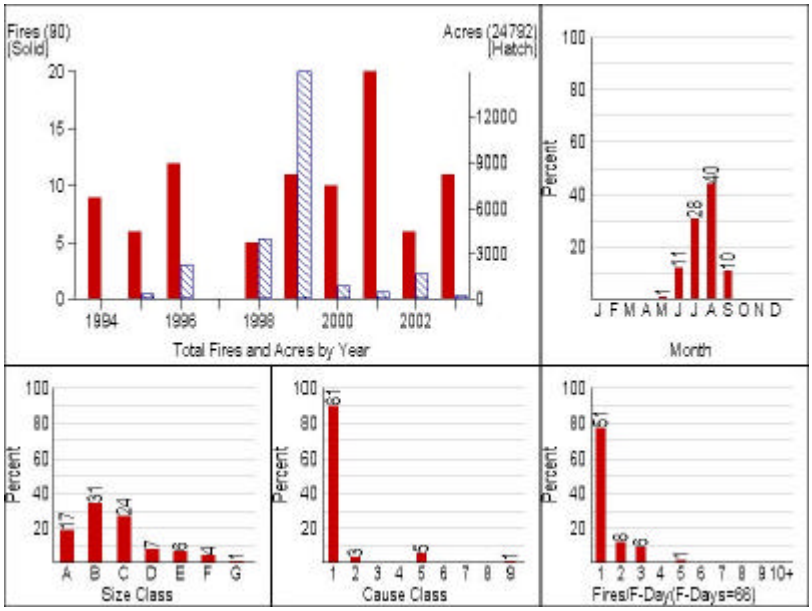
High densities of prehistoric sites are scattered in this unit. Care should be taken to protect these areas from fire damage and suppression operations. Historic sites in this unit include the

Rosebud Field Station (CCC Spike Camp) and historic trails which pass through the southern portion of the unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU includes several small ranching communities and isolated ranches. Other developments include mining structures, Military radar facility and cellular tower on Bovine Mountain, 138 kv power transmission line, and range improvements.

Fire History



From 1994 to 2003, 90 fires have occurred within the FMU, for a total of 24,792 acres. Lightning-caused fires account for 90% of all ignitions. Typically, fires are reported from June through September. Approximately 19% of fires in this FMU are suppressed at ¼ acre. It is not uncommon for fires to exceed 10 acres. On the average, 4 fires will exceed 10 acres, and 1 fire will exceed 300 acres each year in this FMU.

Wildland fire behavior in the dense sagebrush and mixed brush areas of this unit is best predicted by Fuel Model 6. Rates of spread are moderate to high. Lightning is the main source of ignition. Wildland fire behavior in areas of dense juniper is best predicted by Fuel Model 2 or 6 depending on crown density and understory fuel loadings.

Fire Regime/ondition Class

FMU B04 only contains the Wyoming big sagebrush PNVG and it falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, the Wyoming big sagebrush PNVG is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed

Wyoming big sagebrush with tree encroachment	95	3	3	1	Wyoming big sagebrush	2720

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: salt desert shrub (4%), mountain shrubland (1%).

Values at Risk
Primary values to be protected in this unit include: crucial deer winter range, elk and pronghorn year round habitat, and habitat for sage grouse, the bald eagle, and a variety of other raptors. Also at risk are perennial and intermittent streams which provide habitat for a variety of fish species and the various rangelands and range improvements throughout the unit.
.
Several plant species are also values to be protected including the Goose Creek milkvetch (*Astragalus anserinus*), the Idaho Penstemon (*Penstemon idahoensis*), *Arabis falcatoria* (near Lynn), and the Single-leaf Pinyon Pine

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This unit includes the ranching communities of Grouse Creek, Etna, Rosette, Park Valley, Yost, and Standrod. These communities contain clusters of homes and ranches, with other isolated ranches scattered through the unit. Yost and Park Valley are listed as Communities at Risk in the Federal Register. Etna, Rosette, Standrod, and Grouse Creek are recognized as communities at risk by the Northern Utah Fuels Committee. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Other developments include mining structures, communication sites, power lines, and range improvements. Human-caused fires account for 10% of all fires in this unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives`

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these units, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these units are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These areas are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these areas are: 1. Loss of topsoil due to lack of understory in many of the juniper areas as well as the topography of the areas. 2. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., 3. Cultural issues occur on these areas, due to their topography and ecological type. 4. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these areas are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these areas.

Community Protection/Community Assistance Objectives

- In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.

- Work with local fire department to improve wildland fire prevention and suppression capabilities.

Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 3,000 acres. Once the decadal burn target has been reached at 15,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B04 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush
Mechanical	2720
Prescribed Fire	350
Seeding	2720

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

- Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

- Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B05a West Curlew Valley & Matlin Mountain
FMU B05b Hogup Mountain Areas

Location Description
B05a is along the eastern shores of the Great Salt Lake in Box Elder County. It includes Black Mountains Summit.

B05b is on the northwestern edge of the Great Salt Lake in Box Elder County. It includes the Hogup Mountains. The wildcat hills the town of Kelton and a section of the Central Pacific Railroad ACEC.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B05a West Curlew & Malin Mountain	5,044	902				5,389	
FMU B05b	209,562	24,707				145,590	

Characteristics
Annual precipitation averages 6 to 11 inches, slopes are generally 0 to 45% in the desert shrub portions of the unit and increasing to 40% in the upper elevations. Elevation for B05a is 4,500-4,540 and B05b is 5,000-5,500. Major ecological areas are Desert and Semi-Desert: Gravelly Loam, Loam, Shallow Loam, Alkali Flat, Shallow Hardpan, Sandy Loam, Alkali Sand, and Alkali Bench.

This unit is considered desert, semi-desert, and upland transition. The desert and semi-desert vegetation primarily consists of big sagebrush, greasewood, shadscale, fourwing saltbush, gray molly, spiny hopsage, winterfat, rabbitbrush, snakeweed, and black sagebrush with understory of both perennial and annual grasses. The upland transition areas on the Matlin, Wildcat, and Hogup Mountains are predominantly big sagebrush, black sagebrush, bluebunch wheatgrass, and juniper with occasional pinyon. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

There is important mule deer winter range located in the north portion of the Matlin Mountains, on Baker Hill, and on the Wildcat Hills. The area is also year round pronghorn habitat. In addition, this unit provides important sage grouse habitat for strutting grounds, nesting, and brood rearing. This unit is inhabited by the kit fox, a BLM, Utah, State Sensitive Species. The unit provides habitat for the threatened bald eagle, October through March, as well as for other raptors including the Ferruginous and Swainson's hawks, both BLM, Utah, State Sensitive Species.

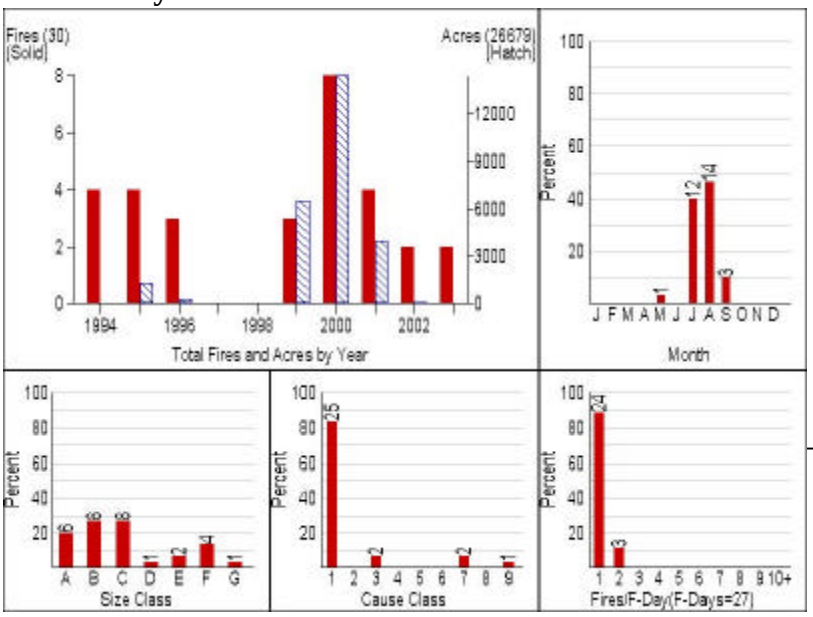
General, dispersed recreation occurs in this area, with increased use during the spring and summer with sightseeing and off-highway vehicle use. High use areas include the Hogup Mountains and Wildcat Hills, which receive and along the Transcontinental Railroad National Back Country Byway.

Cultural resources in this unit include the Central Pacific Transcontinental Railroad Grade (ACEC) and associated sites and clusters of prehistoric sites near springs. The Bidwell-Bartleson Trail passes through a portion of this unit. Protection concerns include the wood trestles and culverts, sidings, and stations along the railroad grade. The Union Pacific Railroad Grade is also in the eastern portion of this unit. The Matlin Mountains contain the remnants of two historic wooden animal traps on state, BLM, and private lands. Both of these sites are susceptible to destruction by wildfire. Clusters of prehistoric sites have been identified at several locations. Some of the oldest known sites in the district occur in this unit. The Wildcat Hills contains a prehistoric obsidian source. The former community of Russian Knoll is also present in this unit. Historic trails in this unit include portions of the Bartleson-Bidwell Trail and the Henley or Salt Lake Cutoff.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

A few ranches and associated structures exist in the FMU. Other improvements include range and wildlife improvements, and an AT&T fiber optics line with associated regeneration stations and facilities.

Fire History



From 1994 to 2003, 30 fires have occurred within the FMU, for a total of 26,679 acres. Lightning-caused fires account for 83% of all ignitions. Typically, fires are reported in July and August. Only 20% of fires in this FMU are suppressed at ¼ acre.
Wildland fire behavior where big sagebrush dominates the

area is best predicted by Fuel Model 6. In areas where sagebrush is scattered and the primary carrier of the fire is an understory of grass, Fuel Model 2 may be a better predictor of fire behavior. Rates of spread in these fuels are moderate to high. In areas of denser juniper, Fuel Model 6 may be a better predictor of fire behavior. Lightning is the dominant cause of fires, but historically, some human-caused fires have occurred.

Fire Regime/Condition Class
FMU B05 contains two PNVG's. The salt desert shrub PNVG occupies 82% of the FMU and falls in fire regime V and condition class 3. The Wyoming big sagebrush PNVG occupies 18% of the land and falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	82	5	3	1	salt desert shrub	No current target
cheatgrass infested Wyoming big sagebrush	18	3	3	1	Wyoming big sagebrush	100

Values at Risk
The primary values to be protected in this unit are important mule deer winter range, the habitat for pronghorn, sage grouse, kit fox, bald eagle, and other raptors including the Ferruginous and Swainson's hawks, rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
The community of Dove Creek is listed in the Federal Register as a Community at Risk. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Human-caused fires account for 17% of fires. Other improvements include guzzlers, troughs, pipelines, and fencing. Regeneration stations associated with the fiber optics line occur across the unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.

2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire would only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments would be conducted at seasons of the year when impacts to wildlife would be minimized. Treatments would normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist.
- Where treatments are proposed in crucial big game and upland game habitats, the treatments would be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these sites are: 1. Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. 2. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., 3. Cultural issues occur on these sites, due to

their topography and ecological type. 4. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these areas.

Community Protection/Community Assistance Objectives

- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 500 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 3,000 acres. Once the decadal burn target has been reached at 15,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B05 by treatment and vegetation type:

Treatment Type	cheatgrass infested Wyoming big sagebrush
Mechanical	100

Prescribed Fire	50
Seeding	100

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B06a Davis Mountain
FMU B06b East Onaqui
FMU B06c Oquirrh Mountain Foothills & North Simpson Mountain Areas
FMU B06d South Mountain

Location Description
B06a is in southern Tooele County and east of the Dugway proving grounds. It is composed of the valley floor between the Simpson and Sheeprock Mountains.

B06b is in Tooele County east of the Onaqui Mountains. This area is typically known as Rush Valley.

B06c is in Utah County along the foothills of the southeastern Oquirrh Mountains.

B06d is in Tooele County and is comprised mainly of private and state grounds of Rush Valley. The towns of Stockton and Bauer are included in this FMU.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B06 Davis Mountain	12,342	82				915	
FMU B06b East Onaqui	28,240	1,023				9,052	
FMU B06c Oquirrh Mountain	1,928	1,422				3,859	

Foothills & North Simpson Mountain Areas							
FMU B06d South Mountain	9,689	12,122				43,596	

Characteristics
Annual precipitation averages 10 to 14 inches, slopes are generally 1 to 15%, elevation for B06a is 5,500, B06b is 5,500-6,000, B06c is 5,000-6,000, and B06d is 5,000-6,000 feet above sea level. Major ecological sites include Desert loam, Desert Shallow Loam, Desert Clay Loam, Desert Gravelly Loam, Semi-Desert Loam, Semi-Desert Alkali Loam, Semi-Desert Shallow Hardpan, Semi-Desert Stony Loam, and Semi-Desert Sandy Loam.

B06c is primarily land managed by the Department of Defense and is in a nonattainment area.

The primary vegetation in these areas is big sagebrush, black sagebrush, rabbitbrush, snakeweed, greasewood, shadscale, winterfat, cliffrose, bluebunch wheatgrass, and juniper. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Mule deer inhabit these three areas in winter and pronghorn year round. Sage grouse historically inhabited these areas but current numbers are very low. The areas are also important to various raptor species including the bald eagle, a threatened species, and the ferruginous and Swainson's hawks, both BLM, and Utah State Sensitive Species.

In general, dispersed recreation occurs in this area throughout the year, with increased use during the spring and during the fall hunting seasons. A Special Recreation Permit (SRP) has been authorized for Walkabout Therapeutic Expeditions throughout the entire unit B06a and the western half of unit B06b. Walkabout is a wilderness youth treatment program which is authorized to operate year round on public lands. Up to five groups camp and hike throughout the operating area. There is increased use adjacent to the Pony Express National Historic Trail and BLM National Back Country Byway on the northern end of B06a and the southern end of unit B06b. Units B06c and B06d receive motorized recreation use in Ophir Canyon, Mercur Canyon, and other areas near the Fivemile Pass recreation area. A high amount of motorized use also occurs near the town of Stockton in unit B06d.

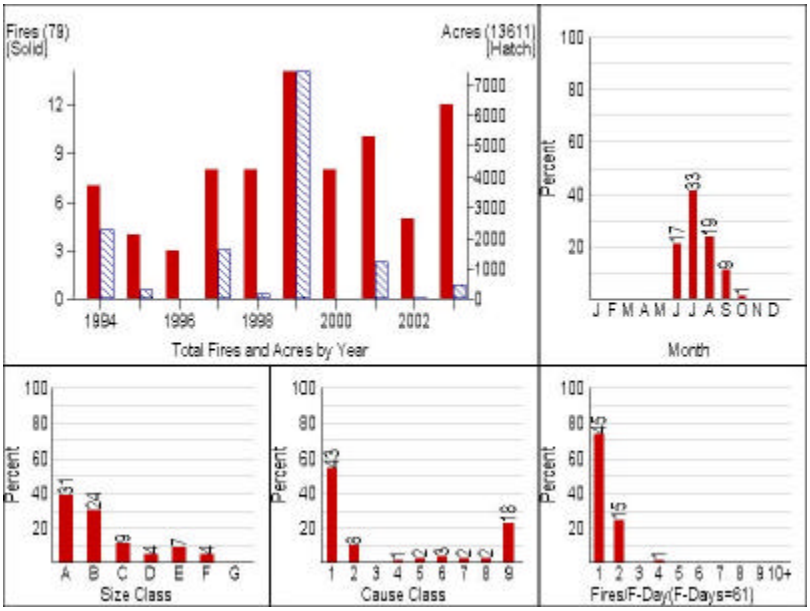
Cultural resources in this unit include the historic mining districts of Ophir and Mercur. Prehistoric sites are also known from the Mercur area. An additional area of concern is the Mercur Cemetery.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU is in close proximity to private lands which include residences and associated developments, and borders the Deseret Chemical Depot on three sides. Range improvements also exist in the area. There are communication facilities on South Mountain associated with local government, a power line from Stockton to Deseret Chemical Depot, and a Union Pacific railroad line.

Fire History



From 1994 to 2003, 79 fires have occurred within the FMU, for a total of 13,611 acres. Lightning-caused fires account for 54% of all ignitions. Fires are reported from June through October. Approximately 70% of fires in this FMU are suppressed at 10 acres (or less). On the average, it is expected that 1 fire will exceed 300 acres each year in this FMU. Wildland fire behavior in sagebrush is best predicted by Fuel Model 6. Rates of spread are moderate. Both lightning and human-caused fires are common in this unit.

Fire Regime/Condition Class

FMU B06 only contains the Wyoming big sagebrush PNVG and it falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, the Wyoming big sagebrush PNVG is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big	95	3	3	1	Wyoming	425

sagebrush with tree encroachment					big sagebrush	

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: salt desert shrub (5%).

Values at Risk
Primary values to be protected in this unit include: mule deer winter range, habitat for pronghorn, sage grouse, raptor species including the bald eagle, the ferruginous and Swainson's hawks, rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk currently identified in this unit listed in the Federal Register. This unit is in close proximity to private lands which include residences and associated developments, and borders the Deseret Chemical Depot on three sides. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Rangeland improvements also exist in the area such as fences and water developments. Almost half of the fires are human-caused in this unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.

General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives
These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these sites are: 1. Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. 2. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., 3. Cultural issues occur on these sites, due to their topography and ecological type. 4. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites: 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. protect and prevent the loss of cultural resources in these areas.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseeded with native as well as introduced vegetative species to assure diversity, as well as emergency establishment.

Community Protection/Community Assistance Objectives
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the decadal burn target has been reached at 6,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B06 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment
Mechanical	425
Prescribed Fire	25
Seeding	425

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B07a	**South Simpson Mountain**
FMU B07b	**Sheeprock & Tintic Mountains**
FMU B07c	**Thorpe Hills**

Location Description
B07a is in Tooele County along its border with Juab County. It is comprised of a part of the Simpson Mountains and runs east where it butts up against the border of the Sheeprock Mountains on of the Wasatch Cache National forest.

B07b is in Utah and Tooele counties along the edge of Juab County. It is comprised of the East Tintic Mountains., and the private ground surrounding the towns of Homansville and Dividend.

B07c is split in half vertically by Utah and Tooele counties. It is located directly south of the fivemile pass recreation area and contains the Thorpe Hills.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B07a South Simpson Mountain	25,020	3,467				2,955	
FMU B07b Sheep & Tintic Mountains	42,006	4,723				36,140	
FMU B07c Thorpe Hills	12,089	2,212				6,597	

Characteristics
Annual precipitation averages 8 to 20 inches, slopes are generally 5 to 25%, elevation for B07a is 7,000-8,000, B07b is 6,000-8,000, B07c is 5,000-6,000 feet above sea level. Major ecological sites are Desert Flat, Semi-Desert Alkali Loam, Semi-Desert Loam, Semi-Desert Sand, Semi-Desert Sandy Loam, Semi-Desert Gravelly Loam, Semi-Desert Stony Loam, Upland Shallow Hardpan, Upland Stony Loam, Upland Loam, Mountain Stony Loam, Mountain Gravelly Loam, and Mountain Loam.

Lower elevations in this unit are dominated by juniper, big sagebrush, black sagebrush, cliffrose, greasewood, spiny hopsage, and Indian ricegrass. Upper elevations have mountain mahogany, bitterbrush, quaking aspen, serviceberry, white fir, and Douglas fir. Some of the best stands of pinyon pine in the district are found in this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This area provides crucial deer winter range, as well as light pronghorn use year round in the low elevations of the unit. The area provides marginal sage grouse habitat. In all of the areas, especially Thorpe Hills, raptor use is high, including the ferruginous hawk, a BLM and Utah State Sensitive Species. The bald eagle, a threatened species, utilizes these areas for foraging and roosting during the period of October through March.

In general, dispersed recreation occurs in this area with increased use during the spring, summer, and fall with hiking, camping, and OHV use, as well as in the fall during the various hunting seasons. Twelve Mile Pass is designated as a large group camping area in unit B07c. A Special Recreation Permit (SRP) has been authorized for a mountain bike race in the Thorpe Hills (unit B07c) in May each year. The Thorpe Hills also receive a high amount of off-highway vehicle and camping use associated with the Fivemile Pass area. A SRP has also been authorized for Walkabout Therapeutic Expeditions throughout the entire unit B07a. Walkabout is a wilderness youth treatment program which is authorized to operate year round on public lands. Up to five groups camp and hike throughout the operating area.

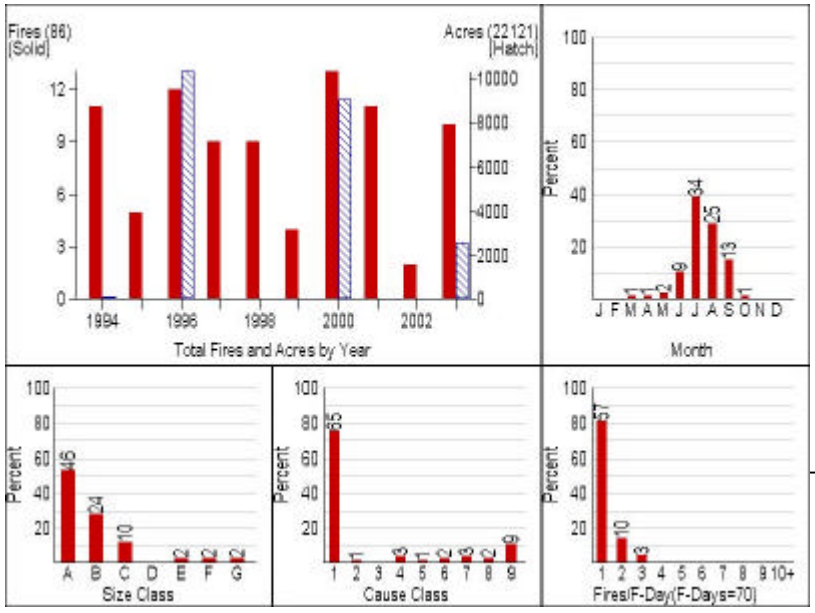
Significant concentrations of prehistoric sites have been identified at several locations within this unit. Historic mining activity is present in the Tintic and Simpson Mountains.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

Several scattered ranches occur in the South Simpson Mountain, Sheeprock Mountain and Tintic Mountain areas. Other developments include mining structures and historic buildings, a Union Pacific railroad line, as well as range improvements.

Fire History



From 1994 to 2003, 86 fires have occurred within the FMU, for a total of 22,121 acres. Lightning-caused fires account for 66% of all ignitions. Fires have been reported from March through October. Approximately 53% of fires in this FMU are suppressed at ¼ acre.

Wildland fire behavior in this unit is best predicted by Fuel Models 2 or 6, depending on Juniper crown closure and understory fine fuel loadings. Typically, rates of spread are moderate. Fire occurrence is moderate. Lightning is the main source of ignition, although human-caused fires have occurred.

Fire Regime/Condition Class
FMU B07 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 80% of the land and falls in fire regime III and condition class 3. The juniper-pinion frequent fire PNVG occupies 20% of the FMU and falls in fire regime I and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed (%)
Wyoming big sagebrush with tree encroachment	76	3	3	1	Wyoming big sagebrush	No current target
pinyon-juniper	20	2	3	1	pinyon-juniper	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mixed conifer (4%).

Values at Risk
The primary values to be protected in this unit are crucial deer winter range, habitat for pronghorn, sage grouse, raptors including the ferruginous hawk, and the bald eagle, and rangelands and range improvements. The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk currently identified in this unit that have been listed in the Federal Register. Several scattered ranches occur in the South Simpson Mountain, Sheeprock Mountain, and Tintic Mountain areas. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Other developments include mining structures and historic buildings, as well as range improvements. Human-caused fires account for about 1/3rd of all fires in this unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.

2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper.

Issues with these sites are: 1. Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. 2. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., 3. Cultural issues occur on these sites, due to their topography and ecological type. 4. Livestock displacement due to fire as well as loss of

range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these areas.

Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseeded with native as well as introduced vegetative species to assure diversity, as well as emergency establishment.

Community Protection/Community Assistance Objectives

- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 3,000 acres. Once the decadal burn target has been reached at 12,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- No targets are currently identified for FMU B7

- Prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B08a West Randolph Area
FMU B08b Sage Creek

Location Description
B08a is in Rich County southwest of the town of Woodruff.

B08b is comprised of a major portion of northern Rich County. It includes most of the BLM and state ground in the northeast corner of the County. Bear Lake is in this unit.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B08a West Randolph	12,416	2,632				33,616	
FMU B08b Sage Creek	84,357	33,558	93			114,667	

Characteristics
Annual precipitation averages 10 to 16 inches, slopes are generally 3 to 30%, elevation for B08a is 7,000-7,500, and B08b is 6,000-7,500 feet above sea level. Major ecological sites include Semi-Desert Loam, Semi-Desert Shallow Loam, Semi-Desert Stony Loam, Upland Stony Lam, Upland Shallow Loam, Semi-Desert Clay, Semi-Wet Meadow, Semi-Wet Streambank and Wet Fresh Streambank. Soils are mainly gravelly, silty, and clayey loams.

Vegetation in this unit is comprised of big sagebrush, black sagebrush, low sagebrush, rabbitbrush, and scattered juniper and serviceberry. Grasses are bluebunch wheatgrass and bluegrass. Forbs include phlox, Indian paintbrush, and others. Patches of quaking aspen and snowberry are found in drainages and on north and east aspects at higher elevations. Stands of lodgepole pine and Douglas fir occur at the upper elevations. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. Historic prescribed fires and spray projects have converted portions of this unit into large areas of crested wheatgrass and native grass vegetation types.

Juniper stands in the unit provide critical deer thermal cover and most of the unit is crucial mule deer winter range. In addition, the unit is used extensively by pronghorn and occasionally by elk and moose. This area also provides important year round habitat for sage grouse. The sage grouse habitat consists of strutting grounds, nesting areas, and brood rearing areas scattered throughout the unit, and the blue grouse and roughed grouse also inhabit the unit. This is an important area for raptors including the ferruginous and Swainson's hawks (BLM and Utah State Sensitive Species) as well as providing foraging and roost areas for the threatened bald eagle (October through March). Pygmy rabbit populations are found in the highest densities in the district on this unit.

A number of perennial streams exist within the unit which have significant fisheries and other wildlife values.

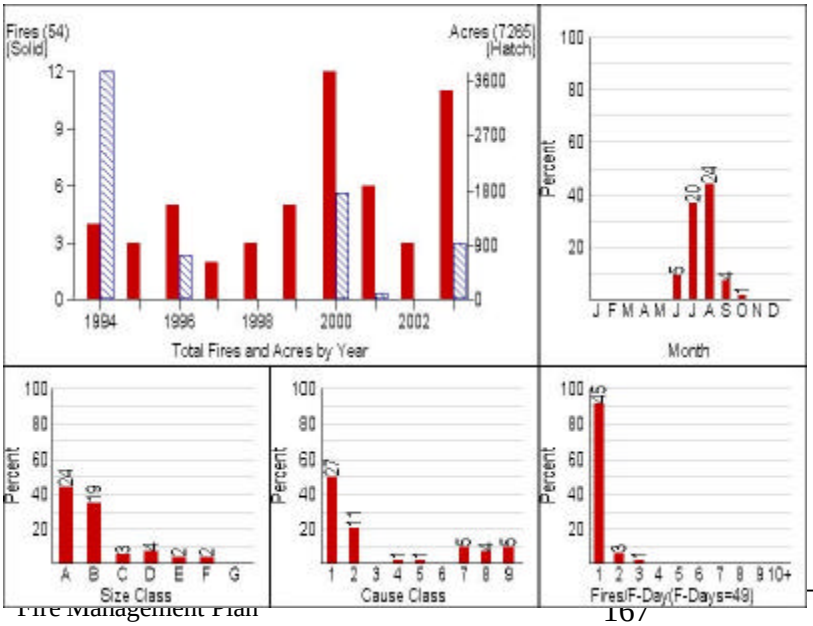
In general, dispersed recreation occurs in this area with increased use during the spring and summer related to fishing and off-highway vehicle use, as well as in the fall during the various hunting seasons. Recreation use has increased at the Little Creek Campground located east of Little Creek Reservoir, and snowmobiling and mountain biking are becoming more popular in this area.

Cultural resource inventories have shown low, but significant site densities in this unit.

This FMU in Rich County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Black-footed Ferret[6] (*Mustela nigripe*) E, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU includes two small rural communities and a few isolated ranches with the associated rangeland developments. Other improvements within the FMU include a weather station, 2, 345 kv power transmission lines, summer homes, and a 20" natural gas pipeline. The Little Creek Campground and associated developments are in this FMU.

Fire History



From 1994 to 2003, 54 fires have occurred within the FMU, for a total of 7265 acres. Lightning-caused fires account for half of all ignitions; the remainder is attributed to unplanned human-caused ignitions. Fires have been reported from June through October. Approximately 44% of fires in this FMU are suppressed at ¼ acre; 80% at 10 acres (or less).

In areas dominated by sagebrush and scattered juniper, wildland fire behavior is best predicted by Fuel Models 2 or 6, depending on crown closure and understory fine fuel loadings. At higher elevations where Lodgepole pine is found, Fuel Model 8 would be considered. Rates of spread are moderate. Fire occurrence is moderate. Both lightning and human-caused fires are common in this area.

Fire Regime/Condition Class
FMU B08 only contains the Wyoming big sagebrush PNVG which falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, Wyoming big sagebrush is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush	98	3	3	1	Wyoming big sagebrush	3600

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mountain shrubland (1%), pinyon-juniper (1%).

Values at Risk
Primary values to be protected include critical deer thermal cover and crucial mule deer winter range, habitat for elk, moose, pronghorn, sage grouse, blue grouse, roughed grouse, raptors, including the ferruginous and Swainson's hawks, and the bald eagle.

A number of perennial streams exist within the unit which has significant fisheries and other wildlife values. In addition, rangelands and range improvements are at risk.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This unit includes the rural communities of Randolph, Laketown, Round Valley, Vista Grande, and Woodruff. Vista Grande, Randolph, Mountain Fuel, Round Valley, Garden City/Elk Hollow, Garden City/Sweetwater Trailer Park, Lakeview, and Laketown have been identified by the Northern Utah Fuels Committee as communities at risk. Communities listed in the Federal Register include: Woodruff, Garden City/Bridgerland, Garden City/Sweetwater, Garden City/Little Switzerland, and Garden City/Swan Creek. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. There are also a number of rangeland developments such as fences, spring developments, corrals and other structures within the unit including a weather station.

The Little Creek Campground and associated developments are in this unit. Half of the fires are human-caused.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These components consist of Non-Wetland sites dominated by desert shrubs and annual grass in the lower elevations to upper elevations of scattered juniper, aspen, lodgepole pine, Douglas fir, and snowberry. On the north end includes cropland areas of wetland private pasture near the local community of Randolph.

Issues of concern are: Loss of Desert shrub communities due to fire, Invasive species of noxious and invasive weeds, juniper invasion on scattered sites, livestock displacement, loss of habitat for wildlife and T&E species, and potential loss of cultural resources due to fire, and loss of cover.

Objectives associated with these sites are 1. Prevent loss and improve watershed values. 2. Prevent loss of native species, especially the shrub component, as defined in the ecological range site description. 3. Prevent and improve habitat for wildlife and T&E species. 4. Improve plant species diversity ratio as defined in the ecological range site description. Provide and prevent loss of cultural resources as a result of emergency fire suppression and stabilization efforts.

These sites include areas of topography that are steep and not suitable for mechanical seed application, however there are many sites that treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseed with native as well as introduced vegetative species to assure diversity, as well as emergency establishment. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.

Community Protection/Community Assistance Objectives

- In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused wildfires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 1,500 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B08 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush
Mechanical	3600
Prescribed Fire	200
Seeding	3600

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire would be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Post Fire Rehabilitation and/or Restoration Objectives

These components consist of Non-Wetland sites dominated by desert shrubs and annual grass in the lower elevations to upper elevations of scattered juniper, aspen, lodgepole pine, Douglas fir, and snowberry. On the north end includes cropland areas of wetland private pasture near the local community of Randolph.

Issues of concern are: Loss of Desert shrub communities due to fire, Invasive species of noxious and invasive weeds, juniper invasion on scattered sites, livestock displacement, loss of habitat for wildlife and T&E species, and potential loss of cultural resources due to fire, and loss of cover.

Objectives associated with these sites are

1). Prevent loss and improve watershed values.

2. Prevent loss of native species, especially the shrub component, as defined in the ecological range site description. 3) Prevent and improve habitat for wildlife and T&E species. 4. Improve plant species diversity ratio as defined in the ecological range site description, 5) Provide and prevent loss of cultural resources as a result of emergency fire suppression and stabilization efforts.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B09a Upper Randolph Creek South Area
FMU B09b Upper Randolph Creek North Area

Location Description
B09a is comprised of land from Summit and Morgan counties. It is mostly privately owned ground and includes the towns of Coalville, Echo, and Emory. It is located east of the Wasatch front.

B09b is Rich County in the Northeastern corner of the field office.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B09a Upper Randolph Creek South Area	760	19,550				254,758	
FMU B09b Upper Randolph Creek North Area	11,972	3,189	14			26,705	

Characteristics
Annual precipitation averages 16 to 20 inches, slopes are generally 5 to 30%, elevation in B09a is 5,000-8,500, and B09b is 7,000-8,000 feet above sea level. Major ecological sites include Upland Shallow Loam, Upland Loam, Upland Clay, Upland Stony Loam, Semi-Wet Fresh Streambank, Mountain Gravelly Loam, Mountain Clay, Mountain Stony Loam, Mountain Windswept Ridge, and High Mountain Loam.

Vegetation in this unit is comprised of big sagebrush, black sagebrush, mountain mahogany, serviceberry, and scattered juniper. Grasses are bluebunch wheatgrass and poas. Forbs include phlox, Indian paintbrush, and others. Upper elevations contain dense stands of quaking aspen, lodgepole pine, Douglas fir, alpine fir, and snowberry. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Most of this unit is crucial mule deer, elk, and moose winter range, as well as habitat for pronghorn in the lower elevations of the unit. The area is also important year round habitat for sage grouse. The sage grouse habitat includes strutting grounds, nesting habitat, and brood rearing areas scattered throughout the unit. The unit also provides habitat for the blue grouse and roughed grouse.

In general, dispersed recreation occurs in this area with increased use during the spring and summer related to fishing and off-highway vehicle use, as well as in the fall during the various hunting seasons. Snowmobiling and mountain biking are also becoming more popular in this area.

Past cultural resource inventories have shown low, but significant site densities in this unit.

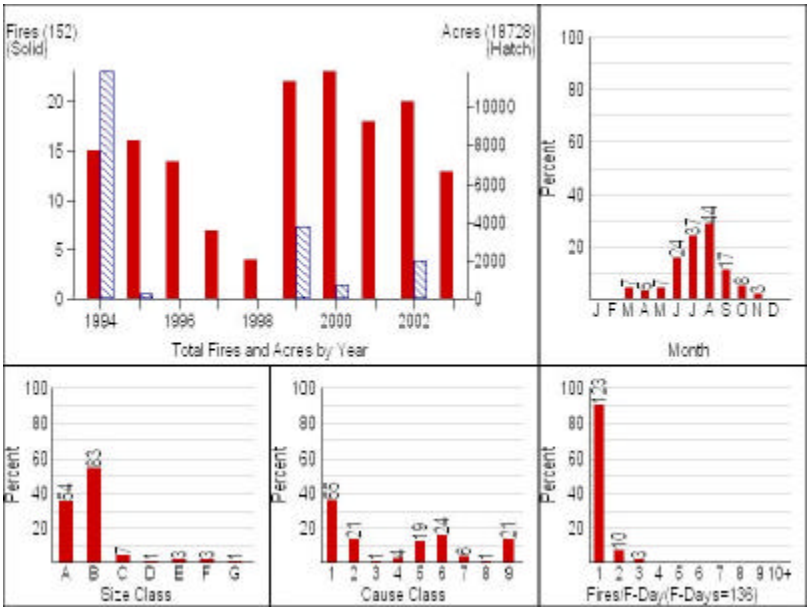
This FMU in Rich County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Black-footed Ferret[6] (*Mustela nigripe*) E, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU in Summit County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Black-footed Ferret[6] (*Mustela nigripes*) E, and Canada Lynx (*Lynx Canadensis*) T.

This FMU in Morgan County has the potential to contain Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx canadensis*) T.

Improvements in this FMU are limited to a few isolated ranches with associated rangeland improvements. Other improvements include: U.S. Interstate 80, Union Pacific railroad, a Cement Plant at Croyden, oil and gas production and well facilities, and oil product pipelines in Weber Canyon.

Fire History



From 1994 to 2003, 152 fires have occurred within the FMU, for a total of 18,728 acres. Lightning-caused fires account for about 36% of all ignitions; the remainder is attributed to unplanned human-caused ignitions. The greatest proportion of human-caused ignitions is reported from equipment use, railroads, and debris burning. Fires have been reported almost year-round from March through November. Approximately 36% of fires in this FMU are suppressed at ¼ acre; 90% at 10 acres (or less).

In areas dominated by sagebrush and scattered juniper, wildland fire behavior is best predicted by Fuel Models 2 or 6, depending on crown closure and understory fine fuel loadings. At higher elevations where dense quaking aspen and Douglas fir stands are found, Fuel Model 8 may be a

better predictor of fire behavior. Rates of spread are moderate. Both lightning and human-caused fires have occurred in this area.

Fire Regime/Condition Class
FMU B09 only contains the warm sagebrush PNVG which falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, Wyoming big sagebrush is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush	87	3	3	1	Wyoming big sagebrush	200

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mixed conifer (1%), mountain shrubland (5%), riparian (1%), pinyon-juniper (1%), Aspen (5%). The difference between the percentages in the PNVG assessment versus the above table is due to the fact that only 4% of the FMU is BLM. This drastically changed the vegetation percentages.

Values at Risk
Primary values to be protected include crucial mule deer, elk, and moose winter range, yearlong pronghorn habitat, sage grouse, blue grouse, and roughed grouse yearlong habitat.
A number of perennial streams exist within the unit which has significant fisheries and other wildlife values. In addition, rangelands and range improvements are at risk.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Morgan, Pineview and Timberlakes have all been recognized in the August 2001 Federal Register as Communities at Risk. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Improvements in this unit are limited to rangeland improvements such as fences and water developments. Approximately 1/3rd of fires are human-caused.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.

3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives:
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These components consist of Non-Wetland sites dominated by desert shrubs and annual grass in the lower elevations to upper elevations of scattered juniper, aspen, lodgepole pine, Douglas fir, and snowberry. On the north end includes cropland areas of wetland private pasture near the local community of Randolph.

Issues of concern are: Loss of Desert shrub communities due to fire, invasive species of noxious and invasive weeds, juniper invasion on scattered sites, livestock displacement, loss of habitat for wildlife and T&E species, and potential loss of cultural resources due to fire, and loss of cover. Objectives associated with these sites are 1. Prevent loss and improve watershed values. 2. Prevent loss of native species, especially the shrub component, as defined in the ecological range site description. 3. Prevent and improve habitat for wildlife and T&E species. 4. Improve plant species diversity ratio as defined in the ecological range site description. Provide and prevent loss of cultural resources as a result of emergency fire suppression and stabilization efforts.

These sites include areas of topography that are steep and not suitable for mechanical seed application, however there are many sites that treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation

techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseeded with native as well as introduced vegetative species to assure diversity, as well as emergency establishment. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.

Community Protection/Community Assistance Objectives

- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused wildfires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 500 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B09 by treatment and vegetation type:

Treatment Type	decadent aspen in Wyoming big sagebrush
Mechanical	200
Prescribed Fire	200

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire would be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B10a Woodruff Creek Areas
FMU B10b Crawford Mountains

Location Description
B10a is directly west of the town of Woodruff in Rich County.

B10b is in Rich County and runs north south along the Utah Wyoming border and includes the Crawford Mountainss.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B10a Woodruff Creek Areas	9,391					3,108	
FMU B10b Crawford Mountains	24,175	4,127				6,093	

Characteristics
Annual precipitation averages 10 to 14 inches, slopes are generally 5 to 50%, elevation in B10a and B10b is 7,000-7,500 feet above sea level. Major ecological sites include Semi-Desert Loam, Semi-Desert Shallow Loam, Upland Shallow Loam, Upland Stony Loam, Semi-Desert Very Steep Shallow Loam, Upland Very Steep Shallow Loam, and Upland Very Steep Stony Loam.

Vegetation in this unit is comprised of big sagebrush, black sagebrush, greasewood, low rabbitbrush, bitterbrush, scattered juniper, Douglas fir (Crawford Mountains portion of unit), and serviceberry. Grasses are bluebunch wheatgrass, thickspike wheatgrass, and Sandburg bluegrass. Forbs include phlox, Indian paintbrush, and others. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned

above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit includes some of the most critical mule deer winter range in Rich County as well as important habitat for pronghorn. Elk and moose also utilize the area in winter, and occasionally in summer. The area provides year round habitat for sage grouse. The sage grouse habitat includes strutting grounds, nesting habitat, and brood rearing areas. The steep, west facing slope of the Crawford Mountains is utilized extensively by raptors for nesting and roosting. The burrowing owl occurs in the unit and is a BLM and Utah State Sensitive Species. An important bald eagle (threatened species) roost site occurs in this area. This entire unit provides important habitat for foraging, roosting, and nesting by a number of raptor species.

Double-needle pinyon pine occurs on the tops of the Crawford Mountains. This is a unique species to Utah.

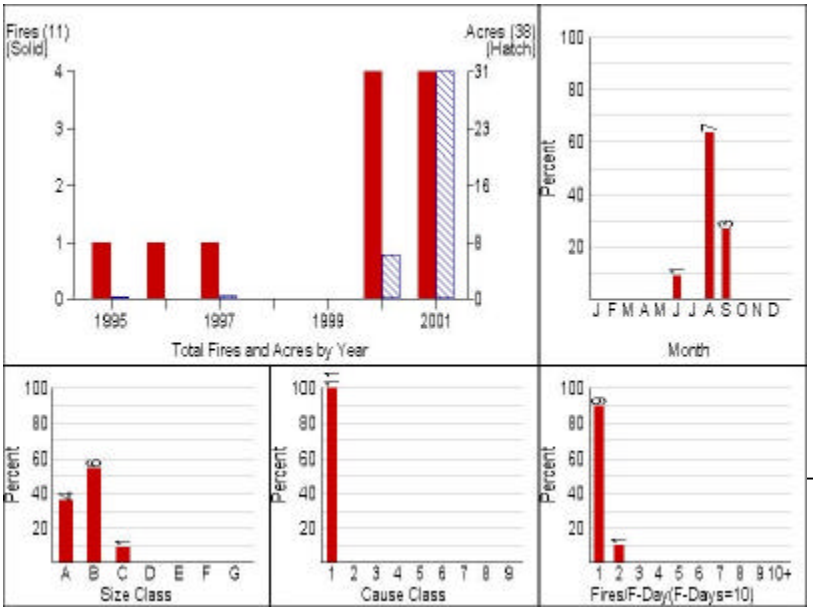
In general, dispersed recreation occurs in this area with increased use during the summer related to sightseeing, camping, off-highway vehicle use, and fishing, as well as in the fall during the various hunting seasons. Recreation in the Birch Creek Campground area is of higher density and lasts from spring through fall.

Past cultural resource inventories have shown low site densities in this unit. Historic mining sites are found on the Crawford Mountains.

This FMU in Rich County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Black-footed Ferret[6] (*Mustela nigripe*) E, and the Canada Lynx (*Lynx Canadensis*) T.

Improvements, including residences on adjacent lands, occur in several areas within this FMU, especially along the west side of the Crawford Mountains where several ranches exist. There are also a number of rangeland developments such as fences, spring developments, corrals and other structures within the FMU. Other improvements include 2, 345 kv power transmission lines, a power grid substation, and several communication facilities on Crawford Mountain for TV, radio, and microwave.

Fire History



From 1994 to 2003, 11 fires have occurred within the FMU, for a total of 38 acres. Lightning-caused fires account for all unplanned ignitions. Fires have been reported from June through September. Approximately 36% of fires in this FMU are suppressed at ¼ acre; 91% at 10 acres (or less).

Wildland fire behavior in this unit is best predicted by Fuel

Model 5 or 6. Rates of spread are low to moderate. Fire occurrence is low.

Fire Regime/Condition Class
FMU B10 only contains the warm sagebrush PNVG which falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, Wyoming big sagebrush is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush with tree encroachment	93	3	3	1	Wyoming big sagebrush	200

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mountain shrubland (1%), grassland (6%).

Values at Risk
Primary values to be protected include the most critical mule deer winter range in Rich County, elk, and moose winter range, pronghorn yearlong habitat, sage grouse habitat, burrowing owl habitat, bald eagle, and a number of raptor species. In addition, rangelands and range improvements are at risk.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
No Communities at Risk are currently identified in this unit that have been listed in the Federal Register. There are areas of concern as the unit borders populated areas in Rich County such as those in unit A06. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Improvements, including residences on adjacent lands, occur in several areas within this unit, especially along the west side of the Crawford Mountains where several ranches exist. There are also a number of rangeland developments such as fences, spring developments, corrals and other structures within the unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.

3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These components consist of Non-Wetland sites dominated by desert shrubs and annual grass in the lower elevations to upper elevations of scattered juniper, aspen, lodgepole pine, Douglas fir, and snowberry. On the north end includes cropland areas of wetland private pasture near the local community of Randolph.

Issues of concern are: Loss of Desert shrub communities due to fire, Invasive species of noxious and invasive weeds, juniper invasion on scattered sites, livestock displacement, loss of habitat for wildlife and T&E species, and potential loss of cultural resources due to fire, and loss of cover. Objectives associated with these sites are 1. Prevent loss and improve watershed values. 2. Prevent loss of native species, especially the shrub component, as defined in the ecological range site description. 3. Prevent and improve habitat for wildlife and T&E species. 4. Improve plant species diversity ratio as defined in the ecological range site description. Provide and prevent loss of cultural resources as a result of emergency fire suppression and stabilization efforts.

These sites include areas of topography that are steep and not suitable for mechanical seed application, however there are many sites that treatment actions at these sites would involve

mechanical, chemical, prescribed burning, and biological controls. Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseed with native as well as introduced vegetative species to assure diversity, as well as emergency establishment. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.

Community Protection/Community Assistance Objectives

- In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90 % of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the decadal burn target has been reached at 300 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU B10 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper

	encroachment
Mechanical	200
Seeding	200

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B11a Henry's Fork Area
FMU B11b Neponset Reservoir Area

Location Description
B11a is in Summit County in the furthest east edge of the field office boundary. It borders Wyoming on its north side and is surrounded by Forest Service lands on all other sides.

B11b is split into two by Summit and Rich counties. The FMU lies on the eastern edge of the field office along the Utah Wyoming border near Evanston, WY.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B11a Neponset Reservoir East Area		7,351	55			18,594	
FMU B11b Neponset Reservoir West Area	18,110	4,980				187,509	

Characteristics
Annual precipitation averages 10 to 12 inches, slopes are generally 1 to 10%, elevation in B11a is 8,000-8,500, and B11b is 6,500-7,000 feet above sea level. Major ecological sites include

Semi-Desert Loam, Semi-Desert Clay, Semi-Desert Stony Loam, Alkali Bottom and Semi-Desert Shallow Loam.

Vegetation in this unit is comprised of big sagebrush, black sagebrush, greasewood, low rabbitbrush, and scattered juniper and serviceberry. Grasses are bluebunch wheatgrass, Sandburg bluegrass, and western wheatgrass. Forbs include phlox, Indian paintbrush, and others. A few crested wheatgrass seedings also exist in the unit. Upper elevation riparian areas include quaking aspen and other deciduous trees. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit is crucial mule deer and elk winter range as well as important year round habitat for pronghorn. The area is also very important sage grouse habitat. The sage grouse habitat includes strutting grounds, nesting habitat, and brood rearing areas. The bald eagle, a threatened species, inhabits the area during the winter.

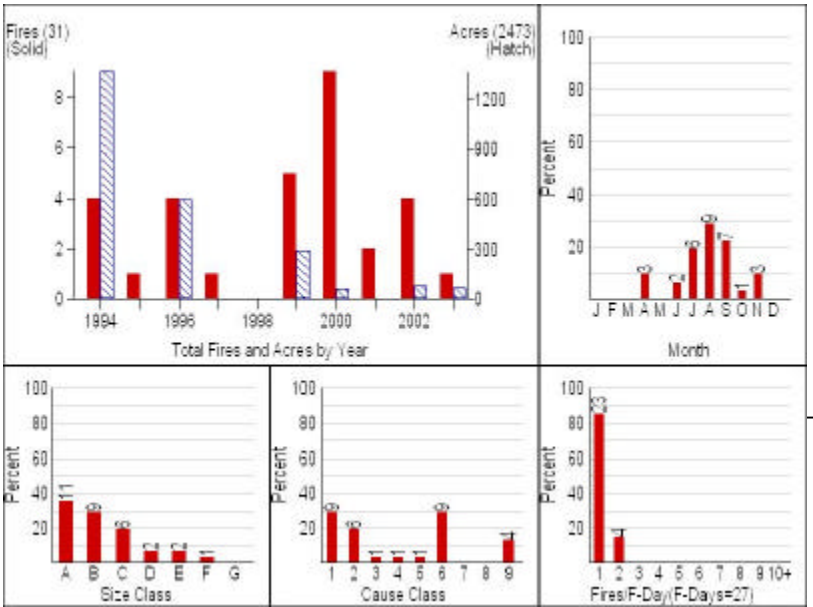
In general, dispersed recreation occurs in this area with increased use during the summer related to sightseeing as well as in the fall during the various hunting seasons.

Past cultural resource inventories have shown low, but significant site densities in this unit.

This FMU in Rich County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Black-footed Ferret[6] (*Mustela nigripe*) E, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU in Summit County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Black-footed Ferret[6] (*Mustela nigripes*) E, and Canada Lynx (*Lynx Canadensis*) T.

Bordering this FMU to the east is a housing development located on the Wyoming side of Murphy Ridge. To the west of the FMU is Home Ranch, the headquarters for Deseret Land and Livestock. Various rangeland improvements also exist in this FMU. Other developments include: a sour gas pipeline and associated facilities, a 230 kv power transmission line, and a distribution gas pipeline facility at Henry's Fork.



Fire History

From 1994 to 2003, 31 fires have occurred within the FMU, for a total of 2473 acres. Lightning-caused fires account for 29% of all ignitions; the remainder is attributed to unplanned human-caused ignitions. Nearly 30% of all fires in this FMU have reported

railroads as the specific cause. Fires have been reported from April through November. Approximately 35% of fires in this FMU are suppressed at ¼ acre; 65% at 10 acres (or less).

Wildland fire behavior in this unit is best predicted by Fuel Model 6. Rates of spread are usually moderate. Fire occurrence is moderate. Both lightning and human-caused fires occur in this area.

Fire Regime/Condition Class
FMU B11 only contains the warm sagebrush PNVG which falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, Wyoming big sagebrush is at a high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush	90	3	3	1	Wyoming big sagebrush	640

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: grassland (9%), riparian (1%).

Values at Risk
This unit includes a "Watchable Wildlife Area" near Deseret Land and Livestock for viewing elk and other wildlife. The Woodruff Wildlife/Livestock Cooperative Management Area (also a "Watchable Wildlife Area") is in this unit and attracts recreationists.

Primary values to be protected include crucial mule deer and elk winter range, pronghorn yearlong habitat, sage grouse habitat, and bald eagle winter area. In addition, rangelands and range improvements are at risk.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Bordering this unit to the east is a housing development located on the Wyoming side of Murphy Ridge. The unit borders Bear River, Wyoming, which was listed as a Community at Risk in the Federal Register as Evanston North prior to the community being incorporated. To the west of the unit is Home Ranch, the headquarters for Deseret Land and Livestock. Home Ranch, in Utah, is also on the Federal Register Communities at Risk list. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Various rangeland improvements also exist in this unit. Approximately 70% of fires are human-caused in this unit.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These components consist of Non-Wetland sites dominated by desert shrubs and annual grass in the lower elevations to upper elevations of scattered juniper, aspen, lodgepole pine, Douglas fir, and snowberry. On the north end includes cropland areas of wetland private pasture near the local community of Randolph.

Issues of concern are: Loss of Desert shrub communities due to fire, Invasive species of noxious and invasive weeds, juniper invasion on scattered sites, livestock displacement, loss of habitat for wildlife and T&E species, and potential loss of cultural resources due to fire, and loss of cover.

Objectives associated with these sites are 1. Prevent loss and improve watershed values. 2. Prevent loss of native species, especially the shrub component, as defined in the ecological range site description. 3. Prevent and improve habitat for wildlife and T&E species. 4. Improve plant species diversity ratio as defined in the ecological range site description. Provide and prevent loss of cultural resources as a result of emergency fire suppression and stabilization efforts.

These sites include areas of topography that are steep and not suitable for mechanical seed application, however there are many sites that treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls. Specific rehabilitation techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs. Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times. The area would be reseeded with native as well as introduced vegetative species to assure diversity, as well as emergency establishment. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.

Community Protection/Community Assistance Objectives

In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.

Work with local fire department to improve wildland fire prevention and suppression capabilities.

Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 300 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 1,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments
The following table shows the 10 year acreage target for FMU B11 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush
Mechanical	540
Prescribed Fire	100
Seeding	540

These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
Additional prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
Prescribed fire would be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies
Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

Upper Elevation Parcels in Utah, Summit, Morgan, Weber, Cache & Wasatch Counties
FMU B12a Upper Elevations Parcels A
FMU B12b Upper Elevations Parcels B
FMU B12c Upper Elevations Parcels C
FMU B12d Upper Elevations Parcels D

Location Descriptions
B12a is in Wasatch County in the southeastern corner of the field office. It is surrounded by Uinta National Forest Service lands.

B12b is mainly in Utah County in Spanish Fork canyon, along the I-6 corridor.

B12c is comprised of most of the private and state grounds in Wasatch County. located along the eastern border of the Salt Lake field office boundary.

B12d is comprised of land found in Summit, Morgan, and Wasatch counties. The FMU boundary begins on the eastern slope of the Wasatch front and runs eastward. The towns and cities of Morgan, Kamas, Midway, Park City, and Oakley are contained in this polygon.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU B12a Upper Elevations Parcels A		2,516	4			3,861	
FMU B12b Upper Elevations Parcels B	10,859	36,293	299			123,877	
FMU B12c Upper Elevations Parcels C		37,929	45,339	2,722		71,426	
FMU B12d Upper Elevations Parcels D	4,022	38,576	454			593,681	

Characteristics

Annual precipitation averages 16 to 25 inches, slopes are generally 5 to 80%, elevation for B12a is 7,500-8,000, B12b is 5,500-8,500, B12c is 8,000-9,000 and B12d is 5,000-9,500feet above sea level. Major ecological sites include Upland Loam, Upland Stony Loam, Upland Shallow Loam, Upland clay, Mountain Gravelly Loam, Mountain Clay, Mountain Stony Loam, and Mountain Windswept Ridge.

These isolated parcels of BLM lands are characterized by quaking aspen, Douglas fir, mountain mahogany, cliffrose, bitterbrush, gambel oak, serviceberry, snowberry, chokecherry, and big sagebrush with understories of mountain brome and bluebunch wheatgrass. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Clay scorpionweed (*Phacelia argillacea*) is an important plant found near BLM lands in the upper portion of Spanish Fork Canyon.

Significant wildlife resource values exist on these lands. Most of the lands are considered crucial winter range for mule deer, elk, and moose as well as providing year round habitat for these species. These parcels are also important upland game habitat for sage grouse, blue grouse,

roughed grouse, and chukar. Many of these lands are forested and provide habitat for a diversity of non-game wildlife species. The bald eagle, a threatened species, makes use of these lands for foraging as well as roosting during the winter.

Rivers and streams occur throughout this unit, and provide habitat for several species of fish, as well as important habitat for a variety of other wildlife species, including the river otter, a BLM and Utah State Sensitive Species.

In general, dispersed recreation occurs in this area.

There is not sufficient information to characterize the cultural resources in this unit at this time. Historic mining activity is present in some of the isolated parcels around Park City.

This FMU in Cache County has the potential to contain Maguire Primrose(*Primula maguirei*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Canada Lynx (*Lynx canadensis*) T, Black-footed Ferret[6] (*Mustela nigripes*) E.
This FMU in Morgan County has the potential to contain Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx canadensis*) T.

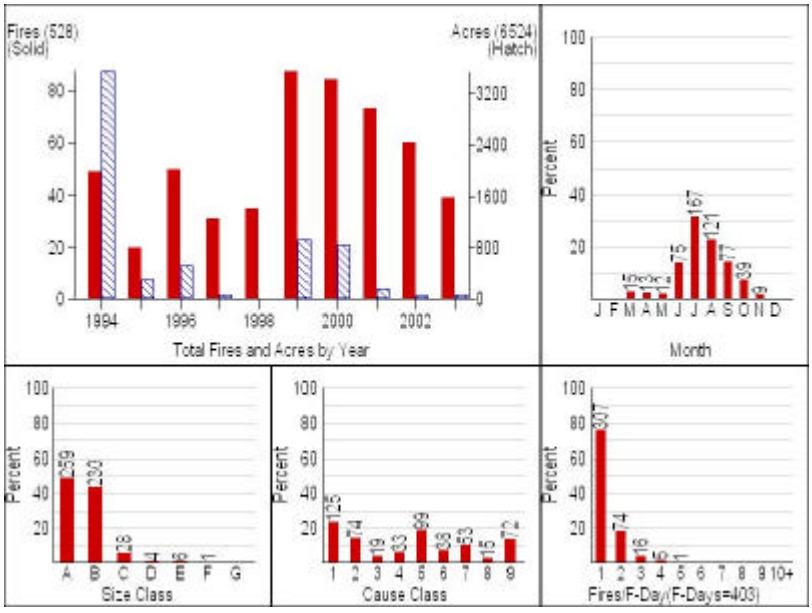
This FMU in Summit County has the potential to contain the Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, Black-footed Ferret[6] (*Mustela nigripes*) E, and Canada Lynx (*Lynx Canadensis*) T.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU in Weber County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Ogden Rocky Mountainsnail (*Oreohelix peripherica wasatchensis*) C, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*).

The properties adjacent to these small parcels of BLM administered lands are private land, many of which have homes and other developments. Other improvements include: Union Pacific Railroad and 2, 345 kv power transmission lines in Spanish Fork Canyon, distribution power lines, oil and gas production and well facilities, and oil product pipelines throughout the FMU, 3 major ski resorts, and the Olympic venues for ski jumping, Bobsled, luge, and skeleton, and Nordic skiing.

Fire History



From 1994 to 2003, 528 fires have occurred within the FMU, for a total of 6524 acres. Lightning-caused fires account for only 24% ignitions; the remainder are attributed to unplanned human-caused ignitions. A wide range of different causes have been reported. Fires have been reported almost yearly from March through November. Typically, fires are small in size and do not grow rapidly. Approximately 49% of fires in this FMU are suppressed at ¼ acre; 93% at 10 acres (or less).

A wide range of fuel complexes exist within this unit. Wildland fire behavior is best predicted by Fuel Model 1 on the lower benches where annual grasses dominate. In the scattered areas where big sagebrush is more dominant, Fuel Model 6 may be a better predictor of wildland fire behavior. In higher elevations where there is a snowberry/quaking aspen/maple association, fire behavior is best predicted by Fuel Model 5. North facing slopes, where there is a dominance of Douglas fir, would be in Fuel Model 8. Rates of spread in these fuels are usually low; however, fire occurrence in is high. This unit is characterized by its wildland/urban interface; consequently, human-caused fires are common.

Fire Regime/Condition Class

FMU B12 contains three PNVG's. The Wyoming big sagebrush PNVG occupies 48% of the land and falls in fire regime III and condition class 2. The mountain shrubland PNVG occupies 24% of the FMU and falls in fire regime II and condition class 2. The Rocky Mountain interior Douglas fir PNVG occupies 28% of the FMU and falls in fire regime III and condition class 2. Due to the accumulation of fuels in the FMU, all three PNVG's are at moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
Wyoming big sagebrush	36	3	2	1	Wyoming big sagebrush	No current target

interior Douglas fir	22	3	2	2	interior Douglas fir	No current target
mountain shrubland	33	2	2	2	mountain shrubland	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: riparian (1%), grassland (8%).

Values at Risk
Primary values to be protected include crucial winter range and yearlong habitat for mule deer, elk, and moose; blue grouse, roughed grouse, chukar, and sage grouse habitat; the river otter; non-game wildlife species habitat; and bald eagle winter area.

A number of perennial streams exist within the unit which has significant fisheries and other wildlife values. In addition, rangelands and range improvements are at risk.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
Park City, Deer Valley, Morgan, Soldier Hollow, Strawberry Valley, Little Diamond Fork, and Spanish Fork Canyon have been identified as Communities at Risk in the Federal Register. The community of Jordanelle has been recognized as at risk by the Northern Utah Fuels Committee. The State of Utah and Forest Service are taking the lead for community fire protection in this unit due to the small size of the BLM parcels. Where necessary, the BLM will work closely with other agencies and communities toward community protection. The properties adjacent to these small parcels of BLM administered lands are private land, many of which have homes and other developments. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. The majority of fires, 76%, are human-caused in this unit.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites are in upper elevation sites around local communities. Areas of BLM land are mainly iso tracts or BLM land intermingled with private/state/or other federal land. These areas are developed with nearby housing and structures in close proximity to BLM land, if not adjacent to it. Typically these sites are characterized by aspen, fir, mountain mahogany, big sagebrush, bluebunch wheatgrass, and mountain brome. Significant wildlife resources occupy this component.

Issues associated with this site are, Loss of forage for wildlife and livestock, loss of habitat for wildlife and T&E species (especially sage grouse), fishery habitat along streams and rivers, invasive and/or noxious weed invasion, and potential loss of cultural resources from fire. The primary issues are urban interface with homes and private structures adjacent or in near proximity of BLM lands.

Objectives for this component include:

1 Protect structures and private property from the event of wildfire.

2. Prevent the decrease of native vegetation composition as defined by the ecological range site description.

3. Prevent the invasion of noxious and invasive weeds on burn areas and areas where weeds threaten property values.

4. Improve and protect wildlife and T&E habitat on areas where fire occurs.

5. Accommodate and work with public to educate and demonstrate stabilization techniques due to the close proximity of these components to the major population, recreation uses are also common and are a major political issue.

These sites are in upper elevation sites around local communities. Areas of BLM land are mainly iso tracts or BLM land intermingled with private/state/or other federal land. These areas are developed with nearby housing and structures in close proximity to BLM land, if not adjacent to it. Typically these sites are characterized by aspen, fir, mountain mahogany, big sagebrush, bluebunch wheatgrass, and mountain brome. Significant wildlife resources occupy this component.

Issues associated with this site are, Loss of forage for wildlife and livestock, loss of habitat for wildlife and T&E species (especially sage grouse), fishery habitat along streams and rivers, invasive and/or noxious weed invasion, and potential loss of cultural resources from fire. The primary issues are urban interface with homes and private structures adjacent or in near proximity of BLM lands.

Objectives for this component include 1 Protect structures, and private property from the event of wildfire. 2. Prevent the decrease of native vegetation composition as defined by the ecological range site description. 3. Prevent the invasion of noxious and invasive weeds on burn areas and areas where weeds threaten property values. 4. Improve and protect wildlife and T&E habitat on areas where fire occurs.

Due to the close proximity of these components to the major population, recreation uses are also common and is a major political issue.

Community Protection/Community Assistance Objectives

- In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. However, in areas where juniper encroachment is evident and pockets of heavy juniper with closed canopies and little under story vegetation now exist, the use of confinement and/or indirect strategies would be encouraged. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 10 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 100 acres. Once the

decadal burn target has been reached at 300 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- No acreage targets are currently identified for FMU B12.
- Prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU B13a	**Wetland Management Areas A**
FMU B13b	**Wetland Management Areas B**
FMU B13c	**Wetland Management Areas C**
FMU B13d	**Wetland Management Areas D**
FMU B13e	**Wetland Management Areas E**
FMU B13f	**Wetland Management Areas F**
FMU B13g	**Wetland Management Areas G**
FMU B13h	**Wetland Management Areas H**
FMU B13i	**Wetland Management Areas I**

Location Description

B13a is directly south of Utah Lake in Utah County.

B13b is in Tooele County in a north south stretch of land between Stockton and Center. The southern tip of the polygon shares a border with the Tooele Army Depot South area.

B13c is in Tooele County along the I-80 corridor from the town of Lakepoint to the town of Delle and includes a portion of the north end of Skull Valley. The Horseshoe Springs ACEC is located in this polygon also.

B13d is located along the southeastern edge of the Great Salt Lake in Salt Lake County.

B13e is in Weber County along the eastern edge of the Great Salt Lake. It is comprised of State and Privately owned lands.

B13f is along the northeastern edge of the Great Salt Lake in Box Elder County. It contains many of the wetlands of the GSL..

B13g is in the eastern half of Box Elder County and includes the Blue Springs ACEC.It contains some of the marsh and wetlands of the Great Salt Lake.

B13h is in Box Elder County along the Northern edge of the Great Salt Lake. It contains some marsh and wetlands of the GSL.

B13i is in Box Elder County along the northeastern section of the Great Salt Lake. This FMU contains a large portion of the Salt Wells ACEC.

	BLM Acres	**State Acres**	**USFS Acres**	**Tribal Acres**	**NPS Acres**	**Private Acres**	**DOD**
FMU B13a Wetland Management Areas A	4,283	2,476				11,232	
FMU B13b Wetland Management Areas B	2,357	130				4,104	
FMU B13c Wetland Management Areas C	47,047	24,631				41,431	
FMU B13d Wetland Management Areas D		6,932				50,236	
FMU B13e Wetland Management Areas E		2,458				2,410	
FMU B13f Wetland Management Areas F	174	78				19,899	
FMU B13g Wetland Management	5,110	13,938				43,861	

Areas G							
FMU B13h Wetland Management Areas H	286	6,454				2,090	
FMU B13i Wetland Management Areas I	5,572	1,604				4,673	

Characteristics
Annual precipitation averages 8 to 12 inches, slopes are generally 0 to 3%, elevation for B13 is 4,500, B13b is 5,000, B13c B13d B13e B13f B13g B13h, and B13i are 4,200 feet above sea level. Major ecological sites in this unit are Desert Salty Silt, Alkali Flats and Semiwet Alkali Flats.

B13d in Salt Lake County is a nonattainment area.
Ogden is within unit B13e in Weber County and is in a nonattainment area.

This unit includes the Salt Wells Wildlife Habitat Area, Blue Springs Willife Habitat Area, Horseshoe Springs Wildlife Habitat Area, Clover Creek Reservoir, Powell Slough, other areas around Utah Lake, and a small area around Rush Lake. The unit also includes the various State Waterfowl Management Areas on the east side of the Great Salt Lake. The vegetation in the unit on non-wetland areas include desert and semi-desert plants such as greasewood, shadscale, big sagebrush, kochia, phlox, Indian ricegrass, squirreltail, and cheatgrass. Wetland areas include the plant species salicornia, pickleweed, salt grass, bulrush, and cattails. Phragmites can also be found in some of these areas. In both areas, associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

These wetland areas provide habitat for a multitude of shorebird and waterfowl species, along with sage grouse, sharp-tailed grouse, and many other non-game species of wildlife in the more upland portions of the unit. These areas are important to shorebirds and waterfowl for migration and nesting and brood rearing activities. Pronghorn and mule deer make use of these wetland areas. The threatened bald eagle and peregrine falcon inhabit these areas. The kit fox, another species of concern, also inhabits a few of these areas.

Unit B13c includes a small amount of non-WSA lands determined to have wilderness character by the BLM.

In general, dispersed recreation occurs in these areas with increased use during the summer with sightseeing, fishing, and bird watching, as well as in the fall during the waterfowl hunting season. The section of unit B13c on the north end of Skull Valley receives a high amount of off-highway vehicle use associated with the Delle Motocross located on state lands. Unit B13i

includes portions of the Central Pacific Railroad Grade which has been designated as the Transcontinental National Back Country Byway. High recreation use occurs in this area.

Cultural resources are identified in the Salt Wells, Blue Springs, and Horseshoe Springs WHA's. The Union Pacific and Central Pacific Railroad Grades pass through the Salt Wells WHA. The Bartleson-Bidwell Trail passes through portions of the Salt Wells WHA. Associated with the Central Pacific Railroad Grade in the Salt Wells WHA are the former town sites/sidings of West Kosmo, East Lake, and West Lake. The Central Pacific Railroad Grade also passes through the Blue Springs WHA. The Blue Springs WHA also includes the sidings of Blue Creek and Conner. It may also contain evidence of worker's camps dating from the initial construction of the railroad grades. The Horseshoe Springs WHA contains a concentration of prehistoric sites.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Salt Lake County has the potential to contain Slender Moonwort (*Botrychium lineare*) C, Ute Ladies'-tresses (*Spiranthes diluvialis*) T, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[1,3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*) T.

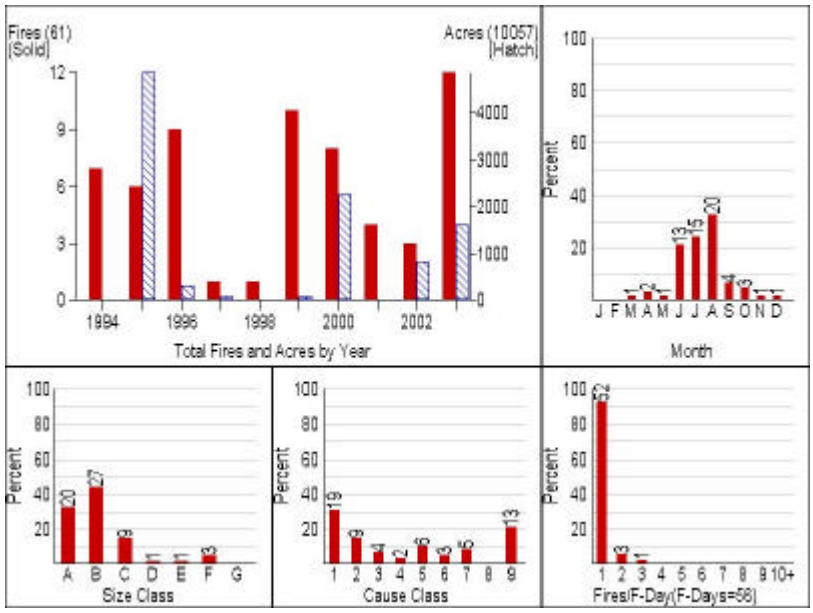
This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Utah County has the potential to contain Clay Phacelia (*Phacelia argillacea*) E, Deseret Milkvetch (*Astragalus desereticus*) T, Ute Ladies'-tresses (*Spiranthes diluvialis*), T, Utah Valvata Snail[6] (*Valvata utahensis*) E, June Sucker[4] *Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and the Canada Lynx (*Lynx Canadensis*) T.

This FMU in Weber County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Ogden Rocky Mountainsnail (*Oreohelix peripherica wasatchensis*) C, June Sucker[8] (*Chasmistes liorus*) E, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C, and Canada Lynx (*Lynx Canadensis*).

This FMU consists of several Wetland Management Areas throughout the Fire Planning Unit (FPU). Improvements in this FMU include gas lines, oil product lines, power transmission and distribution lines, fiber optic cables, U.S. Interstate 80 and Union Pacific Railroad. Several isolated ranches occur within or adjacent to this FMU along with the associated range improvements.

Fire History



From 1994 to 2003, 61 fires have occurred within the FMU, for a total of 10,057 acres. Lightning-caused fires account for 31% of all ignitions; the remainder is attributed to unplanned human-caused ignitions from a wide range of specific causes. Fires have been reported in every month except January and February. About 33% of fires in this FMU are suppressed at ¼ acre; 77% at 10 acres (or less).

Wetland areas include plant species of tall grasses and Phragmites which can potentially burn adjacent to, and across, standing water. Fuel Model 3 best characterized the fire behavior associated with the wetland area vegetation. The expected fire behavior in the unit on non-wetland areas of desert shrub is best predicted by Fuel Model 2. Areas of primarily cheatgrass would fit Fuel Model 1. Rates of spread in this fuel type can be low to explosive depending on fuel moisture and burning conditions.

Fire Regime/Condition Class

FMU B13 only contains the salt desert shrub PNVG which falls in fire regime V and condition class 2. Due to the accumulation of fuels in the FMU, salt desert shrub is at moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	70	5	2	2	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table includes 30% of riparian. The difference between the percentages in the PNVG assessment versus the above table is due to the fact that only 4% of the FMU is BLM. This drastically changed the vegetation

percentages. The rationale for leaving riparian out is that riparian is truly only 7% of the entire FMU.

Values at Risk
Primary values to be protected include wetland areaswhich provide habitat for a multitude of shorebird and waterfowl species, sage grouse, sharp-tailed grouse, bald eagle, peregrine falcon, pronghorn, mule deer, kit fox, and many other non-game species of wildlife.

A number of perennial streams exist within the unit, which have significant fisheries and other wildlife values. In addition, rangelands and range improvements are at risk.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
This unit includes a portion of Skull Valley which was listed in the Federal Register as a Community at Risk. The community of Goshen, located to the south of West Mountain, is recognized by the Northern Utah Fuels Committee as at risk from wildfire. Several communities and isolated ranches occur within or adjacent to this unit. The community of Delle is adjacent to Wetland Management Area C. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Over two-thirds of fires are human-caused in this unit. Improvements in this unit include gas lines, power lines, fiber optic cables, and fences.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.

- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives
These components consist of Wetland sites that are the main reason for this component classification and are dominated by rushes, salt grass, and invasive phragmities. These areas are highly at risk to noxious invasion of weeds due to fire and any other type of disturbance cheatgrass invasion is taking over disturbed sites.

Issues identified for this component are: Invasive weeds, livestock displacement due to loss of available forage, loss of wildlife habitat to include T&E species and cultural resources.

Objectives for these sites:
1. Prevent the decrease in native plant species diversity as defined by the ecological range site description. 2. Protect the area from soil loss due to erosion by wind and water.
3. Protect further loss of habitat for wildlife such as waterfowl, shore birds, mule deer, sage grouse and a variety of raptors.
4. Protect and prevent degradation of cultural resources due to emergency fire suppression and stabilization efforts. 5. Social economics due to local communities in the area.

Use of chemical control would be limited due to the proximity of water along the riparian areas. Chemicals would need to be at least 25 feet from any riparian source when spraying by hand, 100 feet from any water source using ground sprayers, and 250 feet from any water source if aerial applications are done. Any chemical application around water sources would need to be approved on the state agricultural approval list. It is important that livestock be removed during the recovery period after stabilization and rehabilitation, either by complete removal, use of fences, or rotation. Drilling seeding with a rangeland or no-till drill has shown success in past stabilization projects.

Community Protection/Community Assistance Objectives
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies
Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would minimize acreage burned and prevent wildland fires from spreading from BLM administered lands to private and/or other agency jurisdictions. Direct attack suppression tactics using engines and aerial resources would be the primary choice of management tools to keep fires as small as possible. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 500 acres. Once the decadal burn target has been reached at 1,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- No acreage targets are currently identified in FMU B13.
- Prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

Basic fire education and mitigation measures will be taken in this unit. Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU C01 North Deep Creek Range Area

Location Description

C01 is in the southwestern corner of Tooele County and is comprised mostly of the Deep Creek Mountains Wilderness Study Area.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C01 North Deep Creek Range	44,223	273				628	

Area							

Characteristics
Annual precipitation averages 16 to 25 inches, slopes are generally 10 to 60%, and elevation is 6,000-8,000 feet above sea level. Major ecological sites are Upland Loam, Mountain Shallow Loam, Gravelly Loam, and Stony Loam. The soils are generally well drained, rocky, and gravelly with major zones of limestone and quartzite.

Vegetation in this unit is primarily comprised of juniper, big sagebrush, cliffrose, bitterbrush, mountain mahogany, Douglas fir, white fir, limber pine, bristlecone pine, chokecherry, pinyon, quaking aspen, and bluebunch wheatgrass. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

The area serves as spring, summer and fall range for mule deer, elk, and bighorn sheep. This unit is also a high chukar use area. Raptor use is also important in this area.

Kass rockcress (*Draba kassii*) and Deep Creek stickseed (*Hackelia ibapensis*) are BLM, Utah, State Sensitive Species which occur within this unit on the eastern portion of the Deep Creek Mountains. The former plant occurs on the Prospect Quartzite parent material growing in rock crevices and in the shade of other plants. The latter species has been found within Goshute Canyon and is very rare.

Most of this unit encompasses the Deep Creeks WSA/Special Recreation Management Area (SRMA). This unit also includes Non-WSA lands determined to have wilderness characteristics by the BLM and lands that have been proposed for wilderness designation by special interest groups.

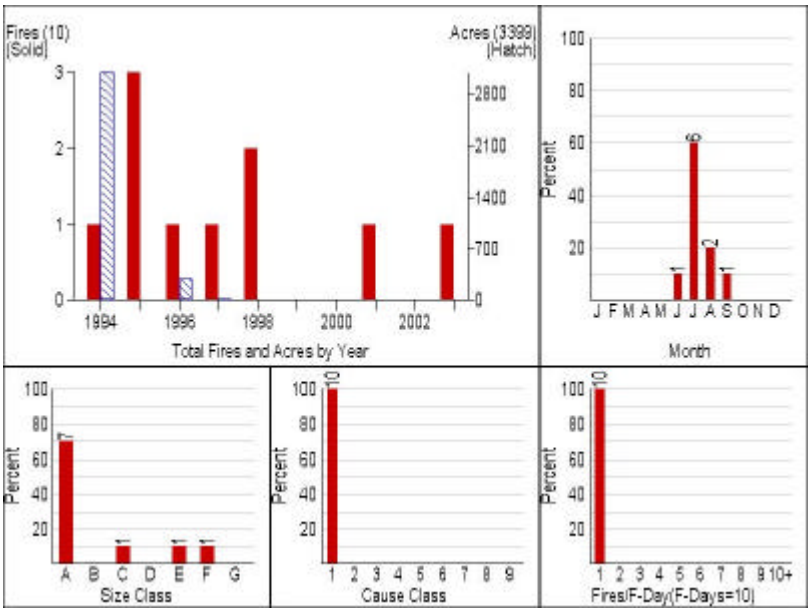
Dispersed recreation use occurs in the Deep Creek Mountains with increased use during the summer related to sightseeing, hiking, off-highway vehicle use, and camping. During the fall there is an increase in use during the various hunting seasons.

Cultural resources in this unit include historic mining structures. The portion of the Deep Creek Range in Juab County is known to contain significant prehistoric sites and unique site types such as heliograph stations. Similar sites may occur within this unit.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

The upper elevations of the Deep Creek Range have had minimal impact by humans. The only developments in this FMU are historic mining structures in Art's Canyon and Goshute Canyon.

Fire History



From 1994 to 2003, 10 fires have occurred within the FMU, for a total of 3399 acres. Lightning-caused fires account for all reports in this FMU. Fires have been reported from June through September. Approximately 70% of fires in this FMU are suppressed at ¼ acre; 70% at 10 acres (or less).
Typically, wildland fire behavior in the vegetation dominated by juniper within this unit is best predicted by Fuel Model 2 or 6 depending on the amount of crown closure and understory fine fuel loadings. Douglas-fir stands would fit Fuel Model 8. Rates of spread are low.

Fire Regime/Condition Class
FMU C01 contains two PNVG's. The juniper-pinion PNVG occupies 79% of the land and falls in fire regime I and condition class 3. The western spruce-fir PNVG occupies 21% of the FMU and falls in fire regime III and condition class 2. Due to the accumulation of fuels in the FMU and the expansion of cheatgrass in nearby areas, the juniper-pinion is at high risk of loss and the spruce-fir is at moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
pinyon-juniper	77	1	3	1	pinyon-juniper	400
spruce-fir	19	3	2	2	spruce-fir	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mountain shrubland (3%), grassland (1%).

Values at Risk
This unit includes important spring, summer, and fall range for mule deer, elk and bighorn sheep. It is also important habitat for chukar and raptors.

The Utah BLM has designated two State Sensitive Species: Kass rockcress (*Draba kassii*) and Deep Creek stickseed (*Hackelia ibapensis*) that occur on the eastern portion of the Deep Creek Mountains. Deep Creek stickseed has been found within Goshute Canyon and is very rare.

The cultural values described under the Characteristics section of this unit are at risk. The wilderness values of the Deep Creek Mountains WSA are at risk.

Communities at Risk
There are no Communities at Risk listed in the Federal Register in this unit. The upper elevations of the Deep Creek Range have had minimal impact by humans. The only developments in this unit are mining structures in Art's Canyon and Goshute Canyon. It is possible that communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, J) guidelines for lands within the boundaries of the Deep Creek Mountains Wilderness Study Area (WSA).

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.

- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C) guidelines for lands within the boundaries of the Deep Creek Mountains Wilderness Study Area (WSA).

Post Fire Rehabilitation and/or Restoration Objectives

These sites are in upper elevations and rainfall ranging from 12 to 20 inches of annual precipitation. These sites are extremely steep, usually 10 to 60% slope. They suceptable to erosion due to topography. These areas are typically mountain shrub to Douglas fir and aspen types. Uniquiness of this area is the Bristlecone pine that inhabits the high mountain top sites. Typically the north slopes have fir and lodgepole pine and the south aspect slopes have mountain mahogany, unless fire has occurred then invasives have moved in (cheatgrass), especially in the low end elevation of this site.

Issues associated with these sites are, erosion and soil loss due to topography/ steepness of slopes. Invasive and noxious weeds that invade the site, such as knapweed, dyers woad, dalmation toadflax, and others. Cheatgrass is an invader to these sites, especially on the southern slope aspects. Loss of forage for wildlife and livestock as well as habitat for wildlife. T&E species are a major concern due to fishery of Lahontan Cutthroat, and sensitive plants like the spiny fishhook cactus. Wilderness study areas associated with these sites are also an issue.

Objectives for these sites include, 1. Protect the area from soil loss and erosion of drainage patterns. 2. Prevent and control invasive or noxious weeds around the burn areas. 3. Prevent loss of wildlife habitat and habitat for T&E species, especially upland game birds. 4. Manage the area and restore sites to enhance the ecological values associated with wilderness areas. 5. Prevent and protect from loss of cultural resources, the area is historically a mining area.

Treatment applications for these components could allow for mechanical, aerial applications, chemical, biological controls, and hand planting. Due to the sites being associate with WSA s, treatment applications need to be cautiously applied in accordance with the land use plan and the wilderness plan. Treatments should include predominately native plant species when planting. Lop and scatter implications need to be limited to allow the area to look natural with the look of being untrammeled by man. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place. Chemical application needs to be sensitive to riparian areas and T&E species in the area.

Rehabilitation and/or restoration actions within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) will adhere to guidelines outlined in Handbook H-1742-1.

Community Protection/Community Assistance Objectives

- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 3,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.
- Adhere to the following guidelines for lands within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA), according to the Interim Management Policy for Lands Under Wilderness Review (H-8550-1):
    - Minimum impact suppression tactics will be used (refer to the Incident Response Pocket Guide, NFES #1077). This does not preclude the use of power tools, aircraft, and motorized firefighting equipment, but minimum impact techniques should be used in association with all suppression tactics.
    - All uses of earth moving equipment within the WSA require authorization.
    - Priority for placement of large fire camps should be outside the WSA.
    - Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in the WSA before developing the Escaped Fire Situation Analysis.
    - Use of motorized vehicles and mechanical equipment during mop-up should be minimized.
    - Efforts should be made to rehabilitate any impacts created by suppression activities prior to releasing fire crews and associated equipment following fire containment.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU C01 by treatment and vegetation type:

Treatment Type	overstocked pinyon-

	juniper
Mechanical	400
Seeding	400

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C).
- Prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems.
  - Prescribed fire activities and vegetation manipulation in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.
  - No chemical, mechanical, or biological means of treatment will be allowed in the WSA.
  - Hand or aerial seeding is permitted within the WSA to restore natural vegetation. The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.

Restoration and Rehabilitation

These sites are in upper elevations and rainfall ranging from 12 to 20 inches of annual precipitation. These sites are extremely steep, usually 10 to 60 percent slope. They are suceptable to erosion due to topography. These areas are typically mountain shrub to Douglas fir and aspen types. Uniquiness of this area is the Bristlecone pine that inhabits the high mountain top sites. Typically the north slopes have fir and lodgepole pine and the south aspect slopes have mountain mahogany, unless fire has occurred then invasives have moved in (cheatgrass), especially in the low end elevation of this site.

Issues associated with these sites are, erosion and soil loss due to topography/ steepness of slopes. Invasive and noxious weeds that invade the site, such as knapweed, dyers woad, dalmation toadflax, and others. Cheatgrass is an invader to these sites, especially on the southern slope aspects. Loss of forage for wildlife and livestock as well as habitat for wildlife. T&E species are a major concern due to fishery of Lahontan Cutthroat, and sensitive plants like the spiny fishhook cactus. Wilderness study areas associated with these sites are also an issue. Objectives for these sites include,

1. Protect the area from soil loss and erosion of drainage patterns.
2. Prevent and control invasive or noxious weeds around the burn areas.
3. Prevent loss of wildlife habitat and habitat for T&E species, especially upland game birds.
4. Manage the area and restore sites to enhance the ecological values associated with wilderness areas.
5. Prevent and protect from loss of cultural resources, the area is historically a mining area.

Rehabilitation and/or restoration actions within the boundary of the Deep Creek Mountains Wilderness Study Area (WSA) will adhere to the following guidelines outlined in Handbook H-1742-1:

- Rehabilitation actions in the WSA should be conducted in a manner so as not to impair the area's suitability for preservation as wilderness.
- Impacts from equipment used for seeding must be carefully planned to be the least intrusive necessary to obtain a successful seeding.
- The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.
- Current Instruction Memorandums, WSA Handbook H-8550-1, and the Bureau's local, state, or national wilderness specialists should be consulted prior to implementing ESR treatments in the WSA.
- Exceptions to the use of nonmotorized equipment in the WSA must be fully justifiable based upon an imminent and severe threat to high downstream values.
- Coordination with interested public and wilderness organizations is encouraged early in the ESR planning process.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.
Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU C02a Pilot Range South
FMU C02b Pilot Range North

Location Description
C02a is directly south of the Donner/Bettridge Creek ACEC in western Box Elder County.

C02b is directly north of the Donner/Bettridge Creek ACEC in western Box Elder County and is comprised of the Pilot Mountains found along the Utah and Nevada stateline.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C02a Pilot Range South	1,155					1,091	
FMU C02b Pilot Range North	33,240	2,013				2,976	

Characteristics
Annual precipitation averages 8 to 20 inches, slopes are generally 20 to 60%, evevation for C02a is 5,000, and C02b is 5,500-8,000 feet above sea level Major ecological sites are Upland Loam,

Mountain Shallow Loam, Gravelly Loam, and Stony Loam. The soils are generally well drained, rocky, and gravelly.

Vegetation in this unit is characterized by juniper, pinyon, bitterbrush, mountain mahogany, Douglas fir, and quaking aspen, and bluebunch wheatgrass. Upper elevation sites that have been burned in the past, are now predominantly bluebunch wheatgrass, spike king fescue, and wooly mullein. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit includes non-WSA lands determined to have wilderness character by the BLM and lands that have been proposed for wilderness designation by special interest groups.

In general, dispersed recreation occurs in this area with increased use during the summer related to sightseeing and off-highway vehicle use, as well as in the fall during the various hunting seasons and pine nut gathering season in October.

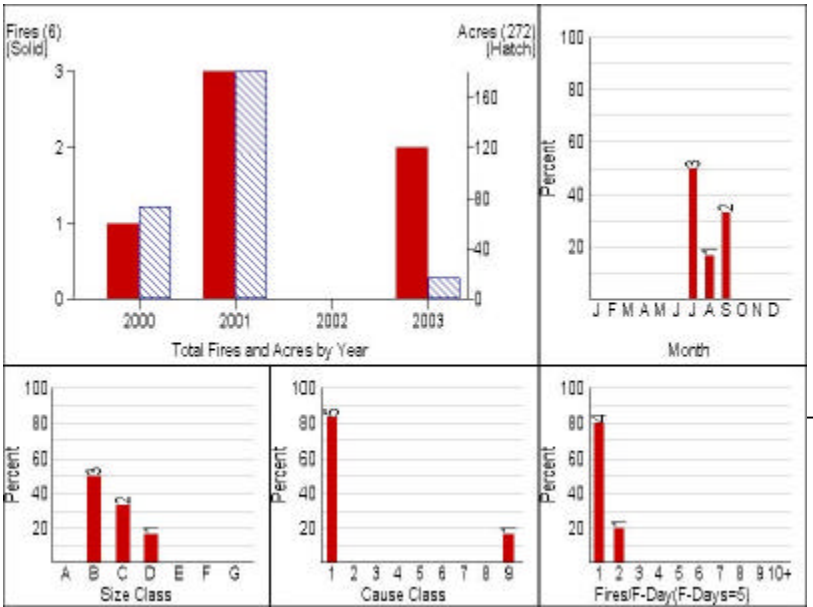
The Pilot Range provides habitat for mule deer, elk, and Rocky Mountain bighorn sheep as well as limited use by pronghorn in the lower elevations of the unit. Upland game birds such as the blue grouse, sage grouse, chukar, and Hungarian partridge also inhabit this area. The area is also important as raptor nesting habitat.

Cottam cinquefoil (*Potentilla cottamii*), a BLM, Utah, State Sensitive plant species, occurs within this unit south of Patterson Pass.

Cultural Resources in this unit include historic mining activity north of Patterson Pass. This includes the remains of a historic tramway on Copper Mountain. Prehistoric sites have been identified in many areas in this unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Improvements which exist in this FMU include a radio and microwave communications facilities at the north end of the range, some historic mining structures (most around Copper Mountain), and the towers of the historic tramway on the west side of Copper Mountain.



Fire History

From 1994 to 2003, 6 fires have occurred within the FMU, for a total of 272 acres. Lightning-caused fires account for all reports, except for one human-caused ignition. Fires have been reported from July through September. None of the fires in

this FMU have been suppressed at ¼ acre; three fires (50%) have been suppressed at 10 acres (or less).

Wildland fire behavior in the vegetation dominated by juniper within this unit is best predicted by Fuel Model 2 or 6 depending on the amount of crown closure and understory fine fuel loadings. Douglas-fir stands would fit Fuel Model 8. Rates of spread are moderate.

Fire Regime/Condition Class
The vegetation, geography, fire history, and location of FMU A04 and C02 are very similar and have been combined for the purpose of analyzing fire regime condition class. The area within both FMU's contains two PNVG's. The Wyoming big sagebrush PNVG occupies 70% of the land and falls in fire regime III and condition class 2. The juniper-pinyon infrequent fire PNVG occupies 30% of the land and falls in fire regime I and condition class 2. Due to the invasion of cheatgrass in adjacent FMU's at lower elevations, the Wyoming big sagebrush is at a moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
pinyon-juniper		1	2	1	pinyon-juniper	No current target
Wyoming big sagebrush with tree encroachment		3	2	1	Wyoming big sagebrush	200

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of:

Values at Risk
This unit includes important habitat for mule deer, elk, and Rocky Mountain bighorn sheep as well as pronghorn in the lower elevations. In addition, there is important habitat for upland game birds such as the blue grouse, sage grouse, chukar, and Hungarian partridge. The area is also important as raptor nesting habitat.

A BLM, Utah, State Sensitive plant species, Cottam cinquefoil (*Potentilla cottamii*), is found in this unit.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk listed in the Federal Register in this unit. Improvements which exist in this unit include a radio communications site at the north end of the range, some mining structures (most around Copper Mountain), and the towers of the historic tramway on the west side of Copper Mountain. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives:
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These sites are in upper elevations and rainfall ranging from 12 to 20 inches of annual precipitation. These sites are extremely steep, usually 10 to 60 % slope. They suceptable to erosion due to topography. These areas are typically mountain shrub to Douglas fir and aspen types. Uniquiness of this area is the Bristlecone pine that inhabits the high mountain top sites. Typically the north slopes have fir and lodgepole pine and the south aspect slopes have mountain mahogany, unless fire has occurred then invasives have moved in (cheatgrass), especially in the low end elevation of this site.

Issues associated with these sites are, erosion and soil loss due to topography/ steepness of slopes. Invasive and noxious weeds that invade the site, such as knapweed, dyers woad, dalmation toadflax, and others. Cheatgrass is a invader to these sites, especially on the southern slope aspects. Loss of forage for wildlife and livestock as well as habitat for wildlife. T&E species are a major concern due to fishery of Lahontan Cutthroat, and sensitive plants like the spiny fishhook cactus. Wilderness study areas associated with these sites are also an issue.

Objectives for these sites include, 1. Protect the area from soil loss and erosion of drainage patterns. 2. Prevent and control invasive or noxious weeds around the burn areas. 3. Prevent loss of wildlife habitat and habitat for T&E species, especially upland game birds. 4. Manage the area and restore sites to enhance the ecological values associated with wilderness areas. 5. Prevent and protect from loss of cultural resources, the area is historically a mining area.

Treatment applications for these components could allow for mechanical, aerial applications, chemical, biological controls, and hand planting. Due to the sites being associate with WSA s, treatment applications need to be cautiously applied in accordance with the land use plan and the wilderness plan. Treatments should include predominately native plant species when planting. Lop and scatter implications need to be limited to allow the area to look natural with the look of being untrammeled by man. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place. Chemical application needs to be sensitive to riparian areas and T&E species in the area.

Community Protection/Community Assistance Objectives

- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less

than 300 acres 90 % of the time at all FILs. The annual target for acreage burned within this FMU is less than 800 acres. Once the decadal burn target has been reached at 1,200 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU C02 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment
Mechanical	200
Seeding	200

- These acres were identified in order to reduce the potential for wildfires to destroy the critical vegetation in the riparian zone of Bettridge Creek. This in turn would benefit the Lahontan cutthroat trout population found within Bettridge Creek. These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU C03a Cedar Mountains South
FMU C03b Cedar Mountains North

Location Description
C03a is located in Tooele County and is comprised of the Cedar Mountains. This also includes the Cedar Mountain Wilderness Study Area. The southern edge of the polygon shares a border with the Utah Test and Training Range South Area.

C03b is located in Tooele County on the north side of I-80 and is comprised of the Grassy Mountains.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C03a Cedar Mountains South	88,816	3,074				3,297	
FMU C03b Cedar Mountains North	11,445	641				455	

Characteristics
Annual precipitation averages 10 to 17 inches, slopes are generally 10 to 40%, and elevation for C03a is 5,000-7,000 and C03b is 5,000-6,500 feet above sea level. Major ecological sites are Semi-Desert Loam, Semi-Desert Gravelly Loam, Semi-Desert Shallow Loam, Semi-Desert Shallow Hardpan, Semi-Desert Very Shallow Loam, Semi-Desert Very Steep Shallow Loam, Upland Shallow Hardpan, Upland Stony Loam, Upland Shallow Loam and Upland Loam.

Vegetation within this unit is primarily juniper with scattered big sagebrush, black sagebrush, and a mixed understory of bluebunch wheatgrass, and other perennial and annual grasses. Desert and semi-desert shrub communities also occur in the low elevations of the unit. Cheatgrass invasion is a concern around the lower elevation perimeters of this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This area is year round mule deer range as well as year round pronghorn range in the lower elevations of the unit. Chukar also inhabits the area. Raptor use is also important in this area.

This unit is also part of the Cedar Mountain Wild Horse Management Area and provides year round range for mule deer.

A large portion of Unit C03a is a designated as the Cedar Mountains WSA. This unit also lands determined to have wilderness character by the BLM and lands that have been proposed for wilderness designation by special interest groups.

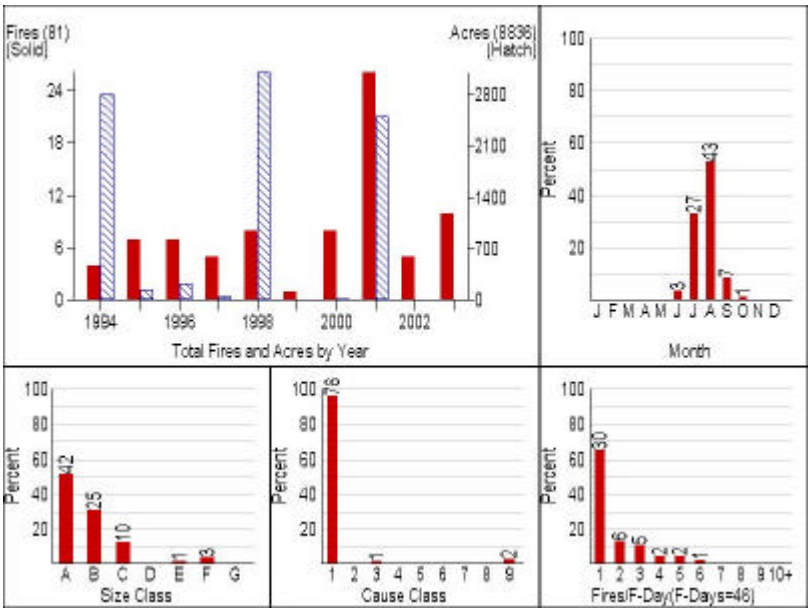
The north end of unit C03a receives a high amount of dispersed off-highway vehicle use associated with the Delle Motocross on state lands. Dispersed recreation use occurs within the Cedar Mountains WSA, with increased use during the summer related to sightseeing, off-highway vehicle use, and camping. During the fall there is an increase in use during the various hunting seasons. The White Rocks area in the southern end of unit C03a receives a high amount of dispersed camping and off-highway vehicle use. Dispersed recreation use occur within Unit C03b.

High concentrations of prehistoric sites are known from areas within this unit and the Hastings Cutoff passes through this unit.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Improvements in this FMU include mining structures, as well as range and wildlife improvements. The Military has communication facilities on Grassy Mountain and on the southern portion of the Cedar Mountains, and there are 2 communication facilities on the north end of the Cedar Mountains.

Fire History



From 1994 to 2003, 81 fires have occurred within the FMU, for a total of 8836 acres. Lightning-caused fires account for nearly all (96%) of the reported fires. Fires have been reported from June through October. Approximately 52% of fires in this FMU are suppressed at ¼ acre; 83% at 10 acres (or less). Multiple fire occurrences are common in this unit. On any day a fire occurs, 33% of the time more than one fire will occur in this FMU. In fact, 22% of the fire-days will have 3 or more fires reported in this unit. Lower elevation sagebrush with grass understory would best be predicted by Fuel Model 6. Juniper sites within this unit are best predicted by Fuel Model 2 or 6 depending on amount of crown closure and understory fine fuel loadings. Rates of spread are moderate.

Fire Regime/Condition Class

FMU C03 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 80% of the land and falls in fire regime III and condition class 3. The juniper-pinion frequent fire PNVG

occupies 20% of the FMU and falls in fire regime I and condition class 2. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
pinyon-juniper	20	1	2	1	pinyon-juniper	No current target
cheatgrass infested Wyoming big sagebrush	76	3	3	1	Wyoming big sagebrush	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: salt desert shrub (4%).

Values at Risk
Desert shrub is an important value at risk. It is important to protect habitat for raptors in this area. In addition, the unit provides year-round mule deer and pronghorn range. It is also range for wild horses.

The cultural values described under the Characteristics section of this unit are at risk. The wilderness values in the Cedar Mountains WSA are at risk.

Communities at Risk
There are no Communities at Risk listed in the Federal Register within this unit. However, this unit borders Skull Valley and Dugway, both Communities at Risk in the Federal Register. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Improvements in this unit include mining structures, as well as range and wildlife improvements (ie: fences, troughs, guzzlers, etc.).

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.

- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, J) guidelines for lands within the boundaries of the Cedar Mountains Wilderness Study Area (WSA).

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C) guidelines for lands within the boundaries of the Cedar Mountains Wilderness Study Area (WSA).

Post Fire Rehabilitation and/or Restoration Objectives

This unit is suceptable to erosion due to topography. These areas are typically mountain shrub to Douglas fir and aspen types. Uniquiness of this area is the Bristlecone pine that inhabits the high mountain top sites. Typically the north slopes have fir and lodgepole pine and the south aspect slopes have mountain mahogany, unless fire has occurred then invasives have moved in (cheatgrass), especially in the low end elevation of this site.

Issues associated with these sites are, erosion and soil loss due to topography/steepness of slopes. Invasive and noxious weeds that invade the site, such as knapweed, dyers woad, dalmation toadflax, and others. Cheatgrass is an invader to these sites, especially on the southern slope aspects. Loss of forage for wildlife and livestock as well as habitat for wildlife. T&E species are a major concern due to fishery of Lahontan Cutthroat, and sensitive plants like the spiny fishhook cactus. Wilderness study areas associated with these sites are also an issue.
Objectives for these sites include

1. Protect the area from soil loss and erosion of drainage patterns.

2. Prevent and control invasive or noxious weeds around the burn areas.
3. Prevent loss of wildlife habitat and habitat for T&E species, especially upland game birds.
4. Manage the area and restore sites to enhance the ecological values associated with wilderness areas.
5. Prevent and protect from loss of cultural resources, the area is historically a mining area.
6. Prevent, control, eradicate noxious and invasive weed invasion using the Integrated Pesticide management program in accordance with the land use plan.

Treatments should include predominately native plant species when planting. Lop and scatter implications need to be limited to allow the area to look natural with the look of being untouched by man. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place. Chemical application needs to be sensitive to riparian areas.

Rehabilitation and/or restoration actions within the boundary of the Cedar Mountains Wilderness Study Area (WSA) will adhere to guidelines outlined in Handbook H-1742-1.

Community Protection/Community Assistance Objectives

- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the decadal burn target has been reached at 2,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.
- Adhere to the following guidelines for lands within the boundary of the Cedar Mountains Wilderness Study Area (WSA), according to the Interim Management Policy for Lands Under Wilderness Review (H-8550-1):
    - Minimum impact suppression tactics will be used (refer to the Incident Response Pocket Guide, NFES #1077). This does not preclude the use of power tools, aircraft, and motorized firefighting equipment, but minimum impact techniques should be used in association with all suppression tactics.
    - All uses of earth moving equipment within the WSA require authorization.
    - Priority for placement of large fire camps should be outside the WSA.

- Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in the WSA before developing the Escaped Fire Situation Analysis.
- Use of motorized vehicles and mechanical equipment during mop-up should be minimized.
- Efforts should be made to rehabilitate any impacts created by suppression activities prior to releasing fire crews and associated equipment following fire containment.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan in order to reintroduce fire into the ecosystem and reduce hazardous fuel accumulation.
- Air quality monitoring may be used to ensure standards are not exceeded.
- The following guidelines will be implemented on lands within the boundary of the Cedar Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C).
  - Prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems.
  - Prescribed fire activities in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- The following guidelines will be implemented on lands within the boundary of the Cedar Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C):
  - Vegetation manipulation in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.
  - No chemical, mechanical, or biological means of treatment will be allowed in the WSA.
  - Hand or aerial seeding is permitted within the WSA to restore natural vegetation. The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.

Restoration and Rehabilitation

Rehabilitation and/or restoration actions within the boundary of the Cedar Mountains Wilderness Study Area (WSA) will adhere to the following guidelines outlined in Handbook H-1742-1:

- Rehabilitation actions in the WSA should be conducted in a manner so as not to impair the area's suitability for preservation as wilderness.
- Impacts from equipment used for seeding must be carefully planned to be the least intrusive necessary to obtain a successful seeding.
- The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.
- Current Instruction Memorandums, WSA Handbook H-8550-1, and the Bureau's local, state, or national wilderness specialists should be consulted prior to implementing ESR treatments in the WSA.
- Exceptions to the use of nonmotorized equipment in the WSA must be fully justifiable based upon an imminent and severe threat to high downstream values.
- Coordination with interested public and wilderness organizations is encouraged early in the ESR planning process.

1 Treatment actions at these sites would involve mechanical, chemical, prescribed burning, and biological controls.
2 Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.
3 Our treatment techniques around local community areas are highly sensitive and have public concern because we are so visible in these areas.
4 Treatments that may pose extra work and follow through with the public are prescribed burning, chaining, chemical control, and biological controls.
5 Drill seeding and hand planting have been successful in these areas.
6 Protective fences to exclude livestock and people from traveling areas are common.

Community Protection/Community Assistance Strategies
Basic fire education and mitigation measures will be taken in this unit. Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU C04a	**Stansbury Mountain Area South**
FMU C04b	**Stansbury Mountain Area East**
FMU C04c	**Stansbury Mountain Area West**
FMU C04d	**Stansbury Mountain Area North**

Location Description
C04a is in Tooele County and surrounds the south end of the Wasatch National Forest Deseret Peak Complex area near the town of Terra and Johnson Pass.

C04b is in Tooele County on the eastern edge of the Deseret Peak Complex section of the Wasatch National Forest found in the Stansbury Mountains.

C04c is in Tooele County on the western side of the Deseret Peak Complex section of the Wasatch National Forest. It is comprised of the foothills of the Stansbury Mountains near the town of Iosepa.

C04d is in Tooele County and is comprised of the north end of the Stansbury Mountains and includes the North Stansbury Mountains Wilderness Study Area (WSA).

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C04a Stansbury Mountain Area South	7,966	6,732				4,161	
FMU C04b Stansbury Mountain Area East	655	13				4,579	
FMU C04c Stansbury Mountain Area West	9,627					2,222	
FMU C04d Stansbury Mountain Area North	17,952	1,520				1,261	

Characteristics

Annual precipitation averages 10 to 25 inches, slopes are generally 2 to 100%, elevation for C04a is 5,500-6,500, C04b is 5,500-6,000, C04c is 5,000-5,500 and C04d is 4,500-7,500 feet above sea level. Major ecological sites include Semi-Desert Loam, Semi-Desert Alkali Loam, Semi-Desert Gravelly Loam, Upland Loam, Upland Shallow Loam, Upland Stony Loam, Mountain Stony Loam, Mountain Loam, and Mountain Gravelly Loam.

Vegetation within this unit is primarily juniper with scattered sagebrush, cliffrose, and a mixed understory of bluebunch wheatgrass and other perennial and annual grasses. Upper elevation areas include bitterbrush, Douglas fir, and mountain mahogany. Some patches of remnant black sagebrush are present at lower elevations. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This unit contains crucial mule deer winter range in the Salt Mountain and Clover Creek Areas. Elk also inhabit portions of this unit. Upland game birds include the blue grouse and historical sage grouse use. The area is utilized by raptors, including the bald eagle, a threatened species, for foraging and roost sites.

The majority of Unit C04d is designated as the North Stansbury Mountains WSA. This unit and Unit C04c include lands that have been determined to have wilderness character by the BLM and lands that have been proposed for wilderness designation by special interest groups.

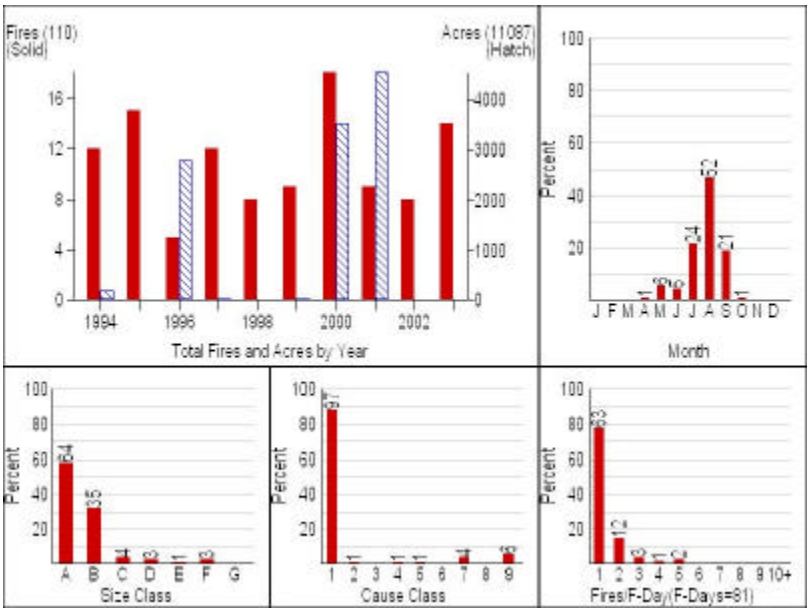
In general, dispersed recreation occurs in this area, with increased use during the summer related to sightseeing, hiking, off-highway vehicle use, and camping, as well as in the fall during the various hunting seasons. The north end of unit C04d at Timpie Point receives a high amount of target shooting use. Horseshoe Spring Knoll is located within Unit C04c. Horseshoe Springs Knoll receives a high amount of large group camping and off-highway vehicle use. The Big Hollow area within Unit C04a receives dispersed recreation use and off-highway vehicle use associated with the Stansbury Front Motorcycle Trail, which continues onto Forest Service managed-lands.

Historic and prehistoric cultural resources are expected to occur in this unit. However, past cultural resource inventories have shown low site densities in this unit.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU is adjacent to private lands, on the west and especially on the east side of the FMU, where improvements include residential properties, commercial businesses, mining structures, and other improvements include: range and wildlife developments, ans a 69 kv power transmission line in Johnson's Pass.

Fire History



From 1994 to 2003, 110 fires have occurred within the FMU, for a total of 11,087 acres. Lightning-caused fires account for nearly all (88%) of the reported fires. Fires have been reported from April through October. Approximately 58% of fires in this FMU are suppressed at ¼ acre; 90% at 10 acres (or less).
Wildland fire behavior in this unit is best predicted by Fuel Model 2 or 6 depending on the amount of crown closure and understory fine fuel loadings. Douglas fir sites at the highest elevations would best be predicted with Fuel Model 8. Rates of spread are usually low, but occasionally moderate.

Fire Regime/Condition Class
FMU C04 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 71% of the land and falls in fire regime III and condition class 3. The juniper-pinion frequent fire PNVG occupies 29% of the FMU and falls in fire regime I and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
pinyon-juniper	27	1	3	1	pinyon-juniper	No current target
Wyoming big sagebrush with tree encroachment	61	3	3	1	Wyoming big sagebrush	3,000

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mixed conifer (3%), mountain shrubland (3%), riparian (1%), Aspen (1%), salt desert shrub (4%).

Values at Risk
Remnant stands of black sagebrush are at risk in this unit. It is important to protect crucial mule deer winter range. In addition, the unit contains important habitat for elk, blue grouse, sage grouse, and raptors, including the bald eagle.

The cultural values described under the Characteristics section of this unit are at risk. The wilderness values in the North Stansbury Mountains WSA are at risk.

Communities at Risk
Within this unit, the communities of Grantsville, South Willow and Big Hollow have been identified as at risk by the Northern Utah Fuels Committee. On the east side of this unit, the community of Rush Valley is in the Federal Register. On the west the unit borders Skull Valley and Terra (Federal Register Communities at Risk). There are also bordering improvements that include residential properties, commercial businesses, mining structures, and other improvements (ie: fences, troughs, guzzlers, etc.). Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. About 12% of fires are human-caused.

Fire Management Objectives

1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, J) guidelines for lands within the boundaries of the North Stansbury Mountains Wilderness Study Area (WSA).

Wildfire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.
- Follow the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C) guidelines for lands within the boundaries of the North Stansbury Mountains Wilderness Study Area (WSA).

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forb would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk

for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper

Issues with these sites are: Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., Cultural issues occur on these sites, due to their topography and ecological type. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these

Rehabilitation and/or restoration actions within the boundary of the North Stansbury Mountains Wilderness Study Area (WSA) will adhere to guidelines outlined in Handbook H-1742-1.

Community Protection/Community Assistance Objectives

- In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies
Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using hand crews and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000acres. Once the decadal burn target has been reached at 2,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.
- Adhere to the following guidelines for lands within the boundary of the North Stansbury Mountains Wilderness Study Area (WSA), according to the Interim Management Policy for Lands Under Wilderness Review (H-8550-1):

- Minimum impact suppression tactics will be used (refer to the Incident Response Pocket Guide, NFES #1077). This does not preclude the use of power tools, aircraft, and motorized firefighting equipment, but minimum impact techniques should be used in association with all suppression tactics.
- All uses of earth moving equipment within the WSA require authorization.
- Priority for placement of large fire camps should be outside the WSA.
- Fire managers should notify Area Managers of any unsuccessful initial attack action on a fire in the WSA before developing the Escaped Fire Situation Analysis.
- Use of motorized vehicles and mechanical equipment during mop-up should be minimized.
- Efforts should be made to rehabilitate any impacts created by suppression activities prior to releasing fire crews and associated equipment following fire containment.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU C04 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with juniper encroachment
Mechanical	3000
Seeding	3000

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.
- The following guidelines will be implemented on lands within the boundary of the North Stansbury Mountains Wilderness Study Area (WSA) in accordance with the Interim Management Policy for Lands Under Wilderness Review (H-8550-1, Ch. 3, C).
  - Prescribed burning may be used where necessary to maintain fire-dependent natural ecosystems.
  - Prescribed fire and vegetation manipulation activities in the WSA cannot adversely impact wilderness values within the WSA and should avoid unnecessary impairment of the area's suitability for preservation as wilderness.

- No chemical, mechanical, or biological means of treatment will be allowed in the WSA.
- Hand or aerial seeding is permitted within the WSA to restore natural vegetation. The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.

Restoration and Rehabilitation

1) Treatments should include predominately native plant species when planting.
2) Lop and scatter implications need to be limited to allow the area to look natural with the look of being untrammeled by man.
3) Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place.
4) Chemical application needs to be sensitive due to riparian areas and the possibility id T&E species in the area.

Rehabilitation and/or restoration actions within the boundary of the North Stansbury Mountains Wilderness Study Area (WSA) will adhere to the following guidelines outlined in Handbook H-1742-1:

- Rehabilitation actions in the WSA should be conducted in a manner so as not to impair the area's suitability for preservation as wilderness.
- Impacts from equipment used for seeding must be carefully planned to be the least intrusive necessary to obtain a successful seeding.
- The use of native species (does not include naturalized species such as crested wheatgrass) is required in the WSA.
- Current Instruction Memorandums, WSA Handbook H-8550-1, and the Bureau's local, state, or national wilderness specialists should be consulted prior to implementing ESR treatments in the WSA.
- Exceptions to the use of nonmotorized equipment in the WSA must be fully justifiable based upon an imminent and severe threat to high downstream values.
- Coordination with interested public and wilderness organizations is encouraged early in the ESR planning process.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU C05 Onaqui and North Simpson Mountain Areas

Location Description
C05 is in Tooele County and is comprised of sections of the Onaqui, Sheeprock, and Simpson Mountainss. This FMU contains the town of Terra and is adjacent to Wasatch National Forest lands located in the Sheeprock Mountainss.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C05 Onaqui and North Simpson Mountain Areas	76,618	12,977				14,014	

Characteristics
Annual precipitation averages 11 to 20 inches, slopes are generally 3 to 30%, elevation for C05 is 5,000-9,000 feet above sea level. Major ecological sites include Desert Flat, Semi-Desert Alkali Loam, Semi-Desert Loam, Semi-Desert Gravelly Loam, Semi-Desert Stony Loam, Semi-Desert Sandy Loam, Semi-Desert Sand, Upland Shallow Hardpan, Upland Stony Loam, Upland Shallow Loam, Upland Loam, Mountain Stony Loam, Mountain Gravelly Loam, and Mountain Loam.

Vegetation within this unit is primarily juniper with scattered big sagebrush, black sagebrush, cliffrose, bitterbrush, and a mixed understory of bluebunch wheatgrass and annual grasses. Cheatgrass invasion has occurred in the lower elevations of this unit. Douglas fir and mountain mahogany are found in the upper elevations of this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

This area is winter range and year round range for mule deer. Upland game birds include the sage grouse, blue grouse, and chukar. Many raptors inhabit this area including the ferruginous and Swainson's hawks, both BLM, Utah, State Sensitive Species. These raptors nest in the scattered juniper areas of the unit. The area is also inhabited by the bald eagle, a threatened species, which utilizes the area for foraging and roosting.

This unit contains the Onaqui Mountains Wildhorse Management Area.

The unit also contains areas where woodland products, such as firewood and juniper posts, are made available to the public.

In general, dispersed recreation occurs in this area with increased use during the spring and summer related to sightseeing, hiking, camping and off-highway vehicle use, as well as in the fall during the various hunting seasons. On the north end of the unit, increased recreation occurs in the area around the Clover Springs Campground. Increase recreation use occurs along the Pony Express/Overland Stage Route through the middle of the unit. The Pony Express has been

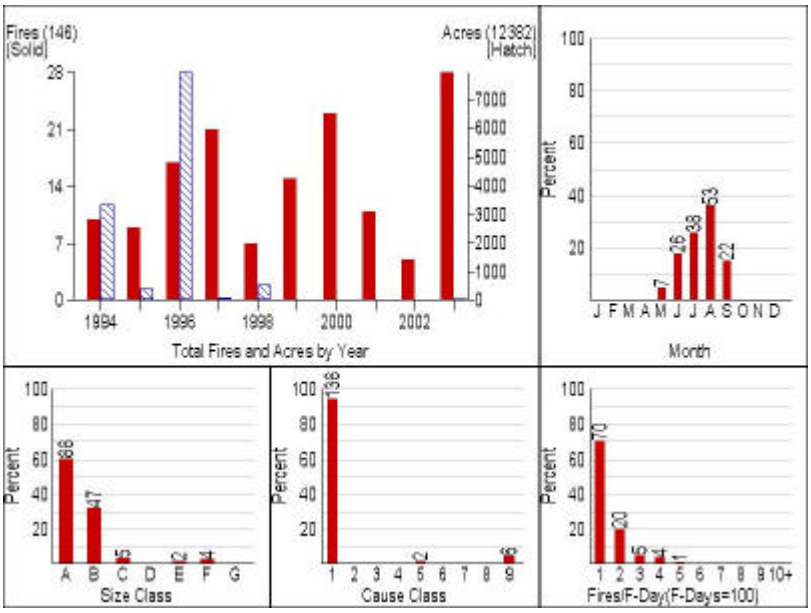
designated a National Historic Trail and BLM National Back Country Byway. Little Valley, adjacent to the Pony Express trail, receives a high amount of large group camping use and off-highway vehicle use. The southern end of the unit receives increased recreation use in the area of the Simpson Springs campground. A Special Recreation Permit (SRP) has been authorized for Walkabout Therapeutic Expeditions throughout the entire unit. Walkabout is a wilderness youth treatment program which is authorized to operate year round on public lands. Up to five groups camp and hike throughout the operating area.

The Pony Express/Overland Stage Route passes through this unit. Aunt Libby's Pet Cemetery is an interpretive site associated with the Pony Express Route in the Onaqui Mountains. Prehistoric sites occur in both isolation and in clusters in the Onaqui Mountains and on the margins of the North Simpson Mountains. The remains of an historical CCC camp exists at Clover Spring.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Improvements in the FMU include adjacent residential properties, commercial businesses, mining structures, and other range and wildlife improvements.

Fire History



From 1994 to 2003, 146 fires have occurred within the FMU, for a total of 12,382 acres. Lightning-caused fires account for nearly all (95%) of the reported fires. Fires have been reported from May through September. Approximately 60% of fires in this FMU are suppressed at ¼ acre; 90% at 10 acres (or less). Multiple fire occurrence days are common in this unit; about 10 days each year. On any day a fire occurs, 30% of the time 2 or more fires will occur in this FMU.

Wildland fire behavior in this unit is best predicted by Fuel Model 2 or 6 depending on the amount of crown closure and understory fine fuel loadings. Rates of spread are typically low, but occasionally moderate.

Fire Regime/Condition Class

FMU C05 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 73% of the land and falls in fire regime III and condition class 3. The juniper-pinion frequent fire PNVG

occupies 27% of the FMU and falls in fire regime I and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
pinyon-juniper	25	1	3	1	pinyon-juniper	No current target
Wyoming big sagebrush with tree encroachment	71	3	3	1	Wyoming big sagebrush	4,000

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: mountain shrubland (4%).

Values at Risk
Values in this unit to protect include year-round range for mule deer with emphasis on crucial winter range. There is important habitat for raptors, including the bald eagle, ferruginous hawk and Swainson's hawk, sage grouse, and blue grouse. Rangelands for wild horses are also important to protect.

The unit is an important source of woodland products to the public.

The cultural values described under the Characteristics section of this unit are at risk.

The campground facilities at Clover Springs are at risk.

Communities at Risk
This unit borders the community of Terra that is within FMU A03b. Terra is on the Federal Register list of Communities at Risk. Additional communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development. Improvements in the unit include adjacent residential properties, commercial businesses, mining structures, and other improvements (i.e.: fences, troughs, guzzlers, corrals, etc.). About five percent of fires are human-caused.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.

2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper

Issues with these sites are: Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., Cultural issues occur on these sites, due to their topography and ecological type. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the Bald

Eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these units 5. Prevent, control, and eradicate invasive and noxious weeds using the Integrated Pesticide Management technique.

Treatment applications for these components could allow for mechanical, aerial applications, chemical, biological controls, and hand planting. Due to the sites being associate with WSAs, treatment applications need to be cautiously applied in accordance with the land use plan and the wilderness plan. Treatments should include predominately native plant species when planting. Lop and scatter implications need to be limited to allow the area to look natural with the look of being untrammeled by man. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place. Chemical application needs to be sensitive to riparian areas and T&E species in the area.

Community Protection/Community Assistance Objectives

- In cooperation with state, county and federal officials and the local residents, work with communities to increase protection capabilities through suppression, planning, education and prevention.
- Work with local fire department to improve wildland fire prevention and suppression capabilities.
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,500 acres. Once the decadal burn target has been reached at 2,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- The following table shows the 10 year acreage target for FMU C05 by treatment and vegetation type:

Treatment Type	Wyoming big sagebrush with tree encroachment
Mechanical	4000
Seeding	4000

- These acres seem high when compared to the table under the Fire Regime Condition Class heading above. This is due to the fact that multiple treatments may occur on the same acre or footprint and could be counted more than once with each treatment type.
- Additional non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire may also be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Restoration and Rehabilitation

1. Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.
2 Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times.
3. The area would be reseed with native as well as introduced vegetative species to assure diversity, as well as emergency establishment.
4. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss.
5. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.
6. Prevention, control and eradication to prevent the spread of noxious and invasive weeds.
7. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place.

Community Protection/Community Assistance Strategies

Hazard assessments, community fire plans and mitigation activities would be completed in cooperation with the state officials, county officials, and local residents. If additional community development occurs within this unit, additional hazard assessments and fire planning would be initiated.

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies.

Local fire departments will be encouraged to apply for Rural Fire Assistance grants to increase fire prevention activities and fire suppression capabilities.

FMU C06 Dugway Range (Including Former Military Use Area)

Location Description
C06 is in southern Tooele County along its border with Juab County. The polygon is composed of the upper elevations of the Dugway range found directly south of the Utah Test and Training Range south area.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C06 Dugway Range (Including Former Military Use Area)	23,778	2,273				1,714	

Characteristics
Annual precipitation averages 5 to 8 inches, slopes are generally 0 to 30%, elevation for C06 is 4,500-5,500 feet above sea level. Ecological sites are mainly Desert Alkali Flat, Desert Salty Silt, Desert Alkali Bench, Desert Flat, Desert Loam, Desert Gravelly Loam, Semi-Desert Gravelly Loam, and Semi-Desert Shallow Loam.

Vegetation within this unit is primarily juniper, cliffrose, and desert shrub species characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, sand dropseed, and cheatgrass. A variety of annual forbs occur in the unit. Juniper trees are very scattered with heavier concentrations at the upper elevations of this unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. This area is considered valuable for its relatively pristine vegetation diversity and composition.

This unit includes lands determined to have wilderness character by the BLM. A large portion of this area includes lands that have been proposed for wilderness designation by special interest groups.

A few mule deer inhabit the unit and pronghorn utilize the lower elevations of the unit. Chukars also inhabit the area. A variety of raptors inhabit the unit including the ferruginous hawk, a BLM, Utah, State Sensitive Species. The kit fox is another species of concern which inhabits the low elevations of this unit.

The outlier species Anderson wolfberry (*Lycium andersonii*) is a unique species which occurs in the unit in the southern portion of the Silver Island Mountains.

Recreation use is dispersed throughout the unit, with increased use during the spring, summer, and fall. An increase in recreation use occurs in the unit associated with the Dugway Geode Beds

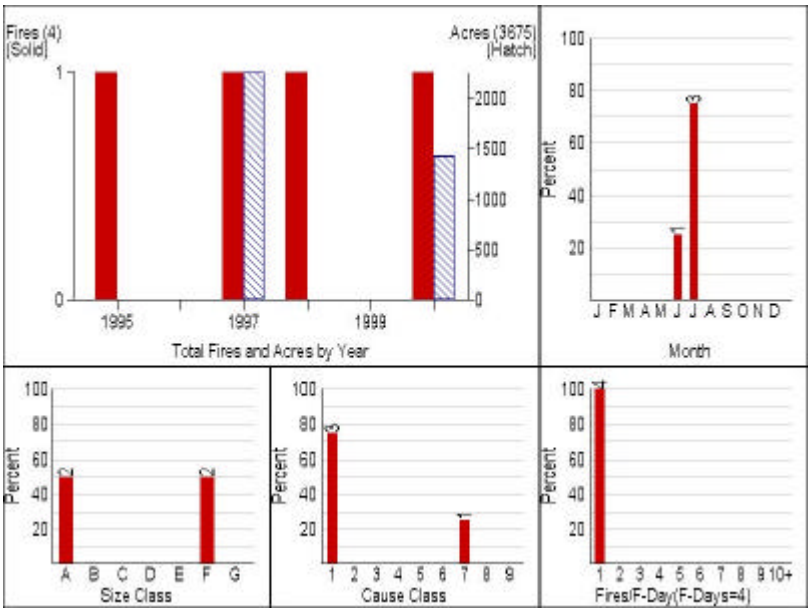
and Pony Express National Historic Trail and Back Country Byway to the south. A Special Recreation Permit (SRP) has been authorized for Walkabout Therapeutic Expeditions within the southern half of the unit. Walkabout is a wilderness youth treatment program which is authorized to operate year round on public lands. Up to five group's camp and hike throughout the operating area.

Historic mining activity is present in the northern portion of the range. Most of the large mines are on patented claims; however, some prospecting activity (shafts, adits) occurs on BLM managed lands.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Developments in this FMU consist of historic mining structures and a few range and wildlife improvements. The north end of the Dugway Range contains the Yellow Jacket Formerly Used Defense (FUD) area.

Fire History



From 1994 to 2003, 4 fires have occurred within the FMU, for a total of 3675 acres. Lightning-caused fires account for 3 out of 4 fires during the 10-year period. Fires have been reported in June and July. Two fires in this FMU were suppressed at ¼ acre; the other two exceeded 1000 acres: Dugway Mountains (2250 acres) and Bullion (1425 acres).

Wildland fire behavior in this desert shrub type is best predicted by Fuel Model 2. Higher elevations have scattered juniper and is best predicted by Fuel Model 2 or 6 depending on the amount of crown closure and understory fine fuel loadings. Rates of spread in this unit are low to moderate. Fire occurrence is relatively low.

Fire Regime/Condition Class

FMU C06 contains two PNVG's. The Wyoming big sagebrush PNVG occupies 68% of the land and falls in fire regime III and condition class 3. The salt desert shrub PNVG occupies 32% of

the FMU and falls in fire regime V and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	30	5	3	1	salt desert shrub	No current target
Wyoming big sagebrush with tree encroachment	70	3	3	1	Wyoming big sagebrush	No current target

Values at Risk
There is an important desert shrub component in this unit. The unit serves contains habitat for mule deer, pronghorn, raptors, and the kit fox.

The outlier species Anderson wolfberry (*Lycium andersonii*) is a unique species which occurs in the unit in the southern portion of the Silver Island Mountains.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk in this unit that are listed in the Federal Register. Developments in this unit consist of mining structures and a few rangeland improvements. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.

- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildfire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper

Issues with these sites are: Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., cultural issues occur on these sites, due to their topography and ecological type. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope, and sage grouse. 4. Protect and prevent the loss of cultural resources in these

Treatment applications for these components could allow for mechanical, aerial applications, chemical, biological controls, and hand planting. Due to the sites being associate with WSAs, treatment applications need to be cautiously applied in accordance with the land use plan and the wilderness plan. Treatments should include predominately native plant species when planting. Lop and scatter implications need to be limited to allow the area to look natural with the look of being untrammeled by man. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place. Chemical application needs to be sensitive to riparian areas and T&E species in the area.

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 500 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,000 acres. Once the decadal burn target has been reached at 3,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from

native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU C07 Old River Bed (Former Military Use Area)

Location Description
C07 is in southern Tooele County along its border with Juab County. The polygon is found directly south of the Utah Test and Training Range south area.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C07 Old River Bed	7,485	645				810	

Characteristics
Annual precipitation averages 5 to 6 inches, slopes are generally 0 to 2%, and elevation is at 4,200 feet above sea level. Major ecological sites are Desert Alkali Bench, Desert Flat, Desert Oolitic Dunes, Desert Gravelly Loam, and Desert Loam.

The dominant vegetation type in this unit is desert shrubs characterized by greasewood, shadscale, fourwing saltbush, Gardner saltbush, horsebrush, ephedra, winterfat, kochia, rabbitbrush, snakeweed, black sagebrush, and small areas of big sagebrush. Grasses consist of Indian ricegrass, galleta grass, needle-and-thread grass, squirreltail, and cheatgrass. A variety of annual forbs occur in the unit. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species. This area has been impacted by fire in the past which has converted much of the area to cheatgrass and other annuals.

The pronghorn inhabits this area throughout the year. Several raptor species, including the ferruginous hawk and burrowing owl, both BLM, Utah, State Sensitive Species, also inhabit the area. The kit fox is also a species of concern which inhabits the unit.

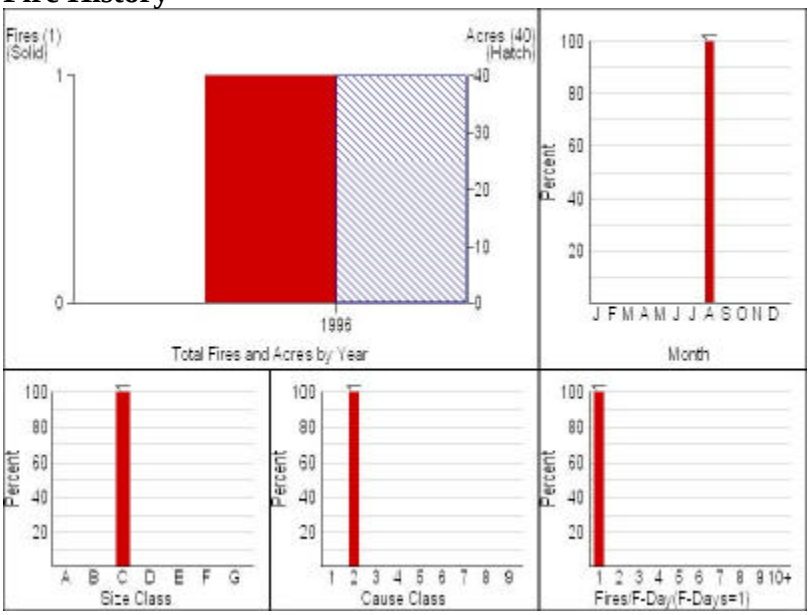
Dispersed recreation occurs in this area.

Limited cultural resource inventories have been conducted in this unit. Low site densities are expected.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Other than a few range improvements very little development has occurred in this FMU. The Old River Bed is also a FUD area and has the Rising Sun Grid area.

Fire History



From 1994 to 2003, only 1 fire occurred within the FMU, for a total of 40 acres. This fire was human-caused (equipment use) reported in August 1996.

Wildland fire behavior in this desert shrub type is best predicted by Fuel Model 2. Rates of spread in this unit are low to moderate. Fire occurrence is extremely low due to sparse fuels.

Fire Regime/Condition Class

FMU C07 only contains the salt desert shrub PNVG and falls into fire regime V and condition class 3. Due to the invasion of cheatgrass within the FMU, salt desert shrub is at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	96	5	3	1	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: grassland (4%).

Values at Risk

Values considered at risk in this unit include the desert shrub plant community and habitat for pronghorn, raptor species, including the ferruginous hawk and burrowing owl, both BLM, Utah, State Sensitive Species, and the kit fox.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk in this unit that are listed in the Federal Register. Other than a few range improvements, very little development has occurred in this unit. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible, and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.

Wildfire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase “edge effect” and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and

passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper

Issues with these sites are: Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., Cultural issues occur on these sites, due to their topography and ecological type. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these

Due to the sites being associated with WSA s, treatment applications need to be cautiously applied in accordance with the land use plan and the wilderness plan. Treatments should include predominately native plant species when planting. Lop and scatter implications need to be limited to allow the area to look natural with the look of being untrammeled by man. Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place. Chemical application needs to be sensitive to riparian areas and T&E species in the area.

1 Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.
2 Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times.
3 The area would be reseed with native as well as introduced vegetative species to assure diversity, as well as emergency establishment.
4. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss.
5. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.
6 Prevention, control and eradication to prevent the spread of noxious and invasive weeds.

7 Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place.

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 1,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU C08 Newfoundland Mountains Area

Location Description

C08 is in Box Elder County and is composed of the Newfoundland Mountains found just north of the Utah Test and Training Range north area.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU C08 Newfoundland Mountains Area	18,757	1,914				1,036	

Characteristics
Annual precipitation averages 6 to 10 inches, slopes are generally 10 to 80%, and elevation is 4,500-6,500 feet above. Major Ecological sites include Semi-Desert Shallow Loam, Desert Loam, Desert Gravelly Loam and Rock Outcrop.

The primary vegetation type in this unit is juniper mixed with mountain mahogany, big sagebrush, black sagebrush, cliffrose, spiny hopsage, and horsebrush with an understory of bluebunch wheatgrass and Salina wildrye. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

The majority of this unit includes lands determined to have wilderness characteristics by the BLM and lands that have been proposed for wilderness designation by special interest groups.

A few mule deer inhabit the unit. Bighorn sheep were introduced into the area in 2001. Chukar frequent this unit, as well as a variety of raptor species, including the ferruginous hawk, a BLM, Utah, State Sensitive Species. The kit fox is another species of concern which inhabits the low elevations of this unit.

In general, dispersed recreation occurs in this area with increased use during the fall during the various hunting seasons.

Historic mining structures are located in the northeast and central portions of the unit. Relatively few sites have been reported from this unit. However, significant prehistoric sites are known from adjacent lands and are likely to occur within this unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Primary improvements are related to past mining activities.

Fire History
No fires were recorded within the last 10-year (1994-2003) period.

The expected fire behavior in this unit is best predicted by Fuel Model 2 or 6 depending on the amount of crown closure and understory fine fuel loadings. Rates of spread in the unit are low to moderate depending on the years fine fuel loadings.

Fire Regime/Condition Class
FMU C08 contains two PNVG's. The salt desert shrub PNVG occupies 73% of the FMU and falls in fire regime V and condition class 3. The Wyoming big sagebrush PNVG occupies 27% of the land and falls in fire regime III and condition class 3. Due to the invasion of cheatgrass within the FMU, both PNVG's are at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
cheatgrass infested salt desert shrub	72	5	3	1	salt desert shrub	No current target
cheatgrass infested Wyoming big sagebrush	28	3	3	1	Wyoming big sagebrush	No current target

Values at Risk
Values that are at risk from wildfire include habitat for mule deer, bighorn sheep, raptors, including the ferruginous hawk, a BLM, Utah, State Sensitive Species, and the kit fox.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk within this unit listed in the Federal Register. Primary improvements are related to past and current mining activities. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.

3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives

- Keep fire size as small as possible, and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.
- Maintain or improve the health of the Sagebrush Steppe ecotype.
- Reduce as much as possible the juniper encroachment from its historic habitat into adjacent ecosystems.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives

- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- General application of prescribed fire will only be allowed in the upland, mountain, and wetland areas in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

These areas vary from a salt desert shrub in the lower areas of these sites, to some upper elevation that might include aspen, cottonwood, and fir. The major tree species occuping these sites are juniper as well as pockets of pinyon trees. Grass/forbs, would include annual and perennial grasses and forbs. These sites are highly susceptible to fire during dry periods, at risk for noxious weeds, and invasives. Cheatgrass occupy many of these areas that have had fires burning brush species, and/or juniper

Issues with these sites are: Loss of topsoil due to lack of understory in many of the juniper sites as well as the topography of the areas. Invasive and noxious weed invasion of cheatgrass, toadflax, dyers woad, knapweeds, etc., Cultural issues occur on these sites, due to their topography and ecological type. Livestock displacement due to fire as well as loss of range improvements. Threatened or Endangered species is an issue, with species such as the bald

eagle, ferruginous hawk, burrowing owl, and other raptors. 4. Recreation is an issue in these areas, impacting hunting, ATV use, sightseeing, etc.

Objectives for these sites are. 1. Watershed protection from erosion and loss of topsoil. 2. Prevent loss of native vegetation through prevention and restoration as defined in the ecological range site description. 3. Prevent loss of habitat that has an impact on T&E species, habitat that supports wildlife such as mule deer, raptors, antelope and sage grouse. 4. Protect and prevent the loss of cultural resources in these units, 5. Provide for control, prevention, eradication of noxious and invasive weeds through the Integrated Pesticide Management approach. Treatment applications for these components could allow for mechanical, aerial applications,

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 100 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 300 acres. Once the decadal burn target has been reached at 1,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire and Non-fire Fuels Treatments

- No acreage targets are currently identified for FMU C8
- Prescribed fire and non-fire fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.
- Prescribed fire would be used to reintroduce fire into the ecosystem. If used, air quality monitoring may be used to ensure standards are not exceeded.

Restoration and Rehabilitation

1 Specific rehab techniques that historically been successful in this component are mechanical chaining and aerial seeding, drill and seed and hand planting of shrubs.

2 Biological controls such as introduction of bugs on knapweed, and use of livestock or use of indigenous animals are used at times.
3 The area would be reseed with native as well as introduced vegetative species to assure diversity, as well as emergency establishment.
4. On steeper sites where there are gullies and drainages that lack cover, anchored straw bales in drainages work to impede flow of runoff to prevent erosion and soil loss.
5. Earthen dams also work well to control emergency runoff, by slowing water and holding soil.
6 Prevention, control and eradication to prevent the spread of noxious and invasive weeds.
7 Any protective fences or other improvements should be designed with the idea that they will be removed after stabilization and rehabilitation has taken place.

Community Protection/Community Assistance Strategies
Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU D01a Bonneville Basin Mudflat Areas North
FMU D01b Bonneville Basin Mudflat Areas South

Location Description
D01a is split between western Box Elder and western Tooele counties, and is comprised of the valley between the Pilot Mountains and Silver Island Mountains.

D01b is comprised of lands found in Box Elder and Tooele counties. This is the largest of all the FMUs. It stretches from the north end of the Utah Test and Training Range (UTTR) south area up past the UTTR north area where it stops near state road 30 in Box Elder. This polygon contains the Bonneville Salt Flats ACEC and most of the Knolls Special Recreation Management Area. It is comprised mainly of valley floors and low elevation lands with little change in elevation.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU D01a Bonneville Basin Mudflat Areas North	58,369	3,227				20,338	
FMU D01b Bonneville Basin Mudflat Areas South	539,276	90,885				218,638	

Characteristics
Annual precipitation averages 4 to 7 inches, slopes are generally 0 to 3%, elevation for D01a and D01b is 4,200 feet above sea level. Major ecological sites in this unit include Desert Salty Silt, Alkali Flats and Semiwet Alkali Flats and Playa. Soils are mainly silty clay loams.

This unit is sparsely vegetated with species such as salicornia, pickleweed, kochia, and other salt tolerant plants.

Portions of this unit may get sporadic waterfowl and shorebird use. Occasionally pronghorn move across the mud flats to access suitable habitat in other areas.

In general, dispersed recreation occurs throughout the area. A high amount of use occurs on the Bonneville Salt Flats, located in Unit D01b. Activities on the Salt Flats include sightseeing, OHV use and several Special Recreation Permit (SRP) events. These events occur yearly in the lae summer/fall and include events such as timed speed trials which involve up to five thousand spectators and participants. Unit D01b also includes the Knolls Special Recreation Management Area (SRMA). The Knolls SRMA receives a high amount of off-highway vehicle and camping use, with increased visitation in the spring and late summer/fall. Bathroom facilities are planned to be installed within the Knolls SRMA in the fall of 2004. SRP event authorized within the Knolls SRMA include a yearly motorcycle race and other off-highway vehicle events. Knolls also receives large group camping use.

Numerous film permits are authorized on the Bonneville Salt Flats in the summer and fall.

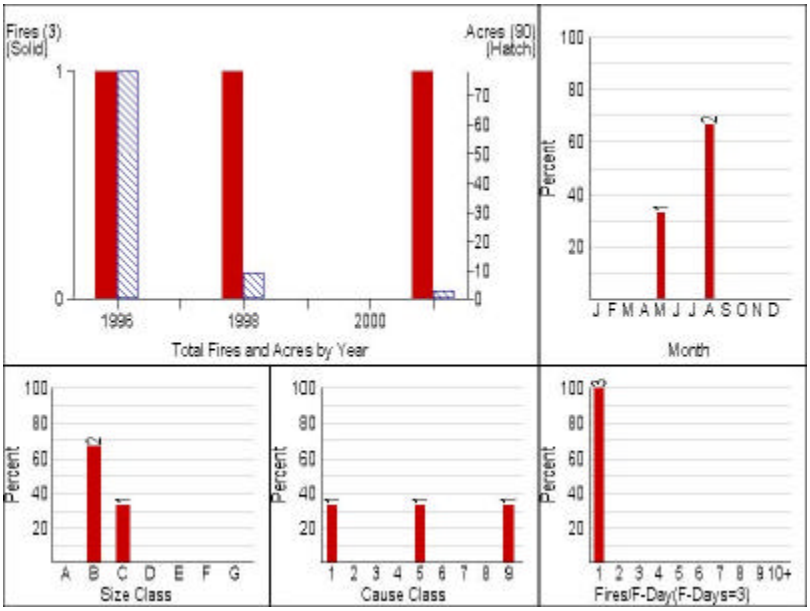
Portions of this unit contain evidence of pioneer migration to California along the California National Historic Trail's Hastings Cutoff. Most often this is in the form of faint wagon tracks. These resources are easily obliterated by OHV use. Sensitive areas include the area between Donner Spring and the Silver Island Range and Floating Island and the area west of Laidlaw's Grassy Mountain Hazardous Waste Landfill. Portions of the mudflat areas were also used extensively by the air force during and after the Second World War as bombing and strafing targets and as a missile test range. Clusters of prehistoric sites are also known to occur in portions of this unit.

This FMU in Box Elder County has the potential to contain Fat-whorled Pondsnail (*Stagnicola bonnevillensis*) C, June Sucker[8] *(Chasmistes liorus*) E, Lahontan Cutthroat Trout (*Oncorhynchus (=Salmo) clarki henshawi*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

Developments in this FMU include U.S. Interstate 80, a main line Union Pacific Railroad, Intrepid potash mine and associated facilities, the Booneville Salt Flats area, and an FAA facility at Barro.

Fire History



From 1994 to 2003, 3 fires have occurred within the FMU, for a total of 90 acres. Lightning-caused fires account for 1 of 3 fires; the other two were unplanned human ignitions. Fires have been reported in May and August. No fires were suppressed at ¼ acre; two at 10 acres (or less).
Typically, fires are uncommon in this unit due to the lack of burnable vegetation. However, where the desert shrub is present, the potential for low to moderate fire behavior exists. Fires will usually reach a point where fuel is discontinuous and will eventually stop spreading.

Fire Regime/Condition Class
FMU D01 only contains the salt desert shrub PNVG and falls in fire regime V and condition class 2. The salt desert shrub is at moderate risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	100	5	2	2	salt desert shrub	No current target

Values at Risk
Values considered at risk from wildfire in this unit include the sparse vegetation, and habitat for waterfowl and shorebirds.

The cultural values described under the Characteristics section of this unit are at risk.

The facilities to be installed at Knolls are risk.

Communities at Risk
The community of Wendover is located in this unit and portions of it are recognized as at risk by the Northern Utah Fuels Committee. Few if any other developments occur in this unit. Communities may be identified as at risk as hazard assessments are completed within or adjacent to this unit or with any future development.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.

Wildland Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.
- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Community Protection/Community Assistance Objectives
- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 1,000 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 5,000 acres. Once the decadal burn target has been reached at 20,000 acres, a review of objectives and strategies will be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Restoration and Rehabilitation

Rehabilitation is very limited in these areas, due to the topography and limited visibility due to mud, and alkaline soils.

Maintain the status Quo.

Community Protection/Community Assistance Strategies

Refer to the Fire Prevention Plan in Appendix B for wildland fire education and prevention strategies. If communities are identified as at risk from wildfire in this unit, mitigation work would be initiated with those communities.

FMU D02 Carrington and Cub Island Areas

Location Description

D02 is comprised of Carrington Island which is located in Tooele County in the middle of the Great Salt Lake. The polygon is surrounded by water on all sides.

	BLM Acres	State Acres	USFS Acres	Tribal Acres	NPS Acres	Private Acres	DOD
FMU D02 Carrington and Cub Island Areas	1207					559	

Characteristics
Annual precipitation averages 7 to 9 inches, slopes are generally 5 to 30%, and elevation is at 4,200-4,500 feet above sea level. Major ecological sites are Desert and Semi-Desert Shallow Loam, Gravelly Loam, Alkali Bench, Loam, and Alkali Loam.

The primary vegetation on this small island is cheatgrass with small areas of desert shrub which include shadscale, horesbrush, ephedra, gray molly, black sagebrush, Indian ricegrass, squirreltail, and sand dropseed. Associations of these plants vary throughout the unit and vegetation in any given portion of the unit may consist of all the species mentioned above, mosaics of varying combinations of these species, or be limited to monotypic stands of one of the species.

Other than the use of these islands by shorebirds and pelicans few wildlife species inhabit these areas. Brine shrimp harvest activities have occurred on Carrington Island.

Little if any recreation occurs on these lands.

Carrington Island was used by the air force as a bombing target and is currently under investigation by the Army Corps of Engineers as a formerly used defense site (FUDS).

This FMU in Tooele County has the potential to contain Ute Ladies'-tresses (*Spiranthes diluvialis*) T, Bald Eagle[3] (*Haliaeetus leucocephalus*) T, and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) C.

No developments or improvements exist on these areas.

Fire History
No fires were recorded within the last 10-year (1994-2003) period.
Potential fire behavior in this unit is best predicted by Fuel Model 1. Spread rates are moderate to high due to the abundance of cheatgrass.

Fire Regime/Condition Class
FMU D02 only contains the salt desert shrub PNVG and falls in fire regime V and condition class 3. Due to the invasion of cheatgrass within the FMU, salt desert shrub is at high risk of loss.

The following table shows the amount of acres to be changed from existing toward desired condition classes and vegetation types over the next ten years on BLM land in the FMU.

Major Vegetation Type	% of veg type on BLM in FMU	Fire Regime	Existing Condition Class	Desired Condition Class	Desired Vegetation Type (PNVG)	Acres Changed
salt desert shrub	92	5	3	2	salt desert shrub	No current target

The balance of "% of veg type on BLM in FMU" not accounted for in above table include insignificant percentages of: sagebrush (8%).

Values at Risk
Habitat for shorebirds, pelicans and a few wildlife species on the island are at risk, especially with the abundance of cheatgrass currently on the island that is spread by wildfire.

The cultural values described under the Characteristics section of this unit are at risk.

Communities at Risk
There are no Communities at Risk in this unit listed in the Federal Register. No developments or improvements currently exist on these areas.

Fire Management Objectives
1. Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
2. Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
3. Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

Suppression Objectives
- Keep fire size as small as possible and fire intensity as low as possible in the Salt Desert Shrub ecotype to minimize loss of this sensitive vegetation type.
- Stop or reduce as much as possible the conversion of healthy ecosystems to cheatgrass.

Fire Use, Prescribed Fire, and Non-Fire Fuels Treatment Objectives
- Vegetation management would include a wide variety of management activities including prescribed fire, mechanical manipulation, seeding to less flammable and more desirable species, fuelbreak establishment, and other strategies. These activities would be used to reduce fire severity and occurrence and reduce hazardous fuel accumulation.
- Desire to implement fuels treatments which will improve the fire regime condition class of the vegetation from class 3 to 2 or 1, especially to reduce the occurrence, establishment, and proliferation of cheatgrass.
- Prescribed fire and mechanical/chemical treatments in desert shrub and semi-desert shrub communities will generally be limited to black stripping as a hazardous fuel reduction

method, or as site preparation for green stripping projects within the FMU. General application of prescribed fires in the desert shrub and semi-desert shrub communities will not be allowed in this FMU.

- Prescribed fire and mechanical/chemical treatments will be located in areas where the treatments will reduce the threat of large uncontrolled fires, create small mosaics of impacted area to increase "edge effect" and improve wildlife and plant diversity, and be spaced at proper distances so as to not cause impacts to local wildlife.
- Prescribed fires and mechanical/chemical treatments will be conducted at seasons of the year when impacts to wildlife will be minimized. Treatments will normally not occur during the period of March through July where conflicts with nesting raptors and passerine birds exist. Where treatments are proposed in crucial big game and upland game habitats, the treatments will be timed and designed to minimize impacts to these species during these crucial time periods.

Post Fire Rehabilitation and/or Restoration Objectives

This area is remote and virtually inaccessible to the public. Prevent the occurance of unnatural fires on these remote sites.

Community Protection/Community Assistance Objectives

- Prevent human-caused fires.

Fire Management Strategies

Suppression

- The primary strategy within this FMU will apply the most Appropriate Management Response which would encourage the use of confinement and/or indirect strategies to keep fires within established parameters. Indirect attack suppression tactics would be employed when fire behavior and Fire Intensity Level (FIL) precludes safe direct attack while ensuring the preservation of the Salt Desert Shrub ecotype. Direct attack suppression tactics using engines and aerial resources would be the preferred strategy under extreme burning conditions, or when natural/cultural resources or other values are at risk. AMR will be used to manage all fires in accordance with management objectives based on current conditions and fire location. Wildland fires will be suppressed at less than 1,000 acres 90% of the time at all FILs. The annual target for acreage burned within this FMU is less than 1,089 acres. Once the decadal burn target has been reached at 10,890 acres, a review of objectives and strategies would be initiated to develop new suppression criteria for this FMU.

Wildland Fire Use

- Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire

- No targets have been identified for this FMU. Prescribed fire may be considered as needed by a site-specific plan for black-stripping or in preparation for green-stripping.
- Air quality monitoring may be used to ensure standards are not exceeded.

Non-fire Fuels Treatments

- No targets have been identified for this FMU. Fuels treatments may be considered as needed by a site-specific plan in order to curb the conversion of vegetation types from native species domination to non-native species domination and juniper encroachment.

Restoration and Rehabilitation

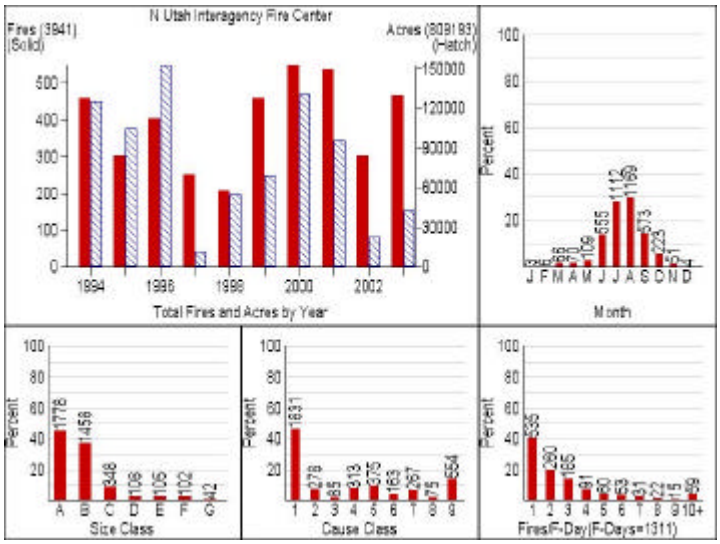
Community Protection/Community Assistance Strategies

General fire prevention measures will apply in this unit unless communities at risk are identified. See the Fire Prevention Plan in Appendix G for fire education and prevention strategies.

IV. Fire Management Components

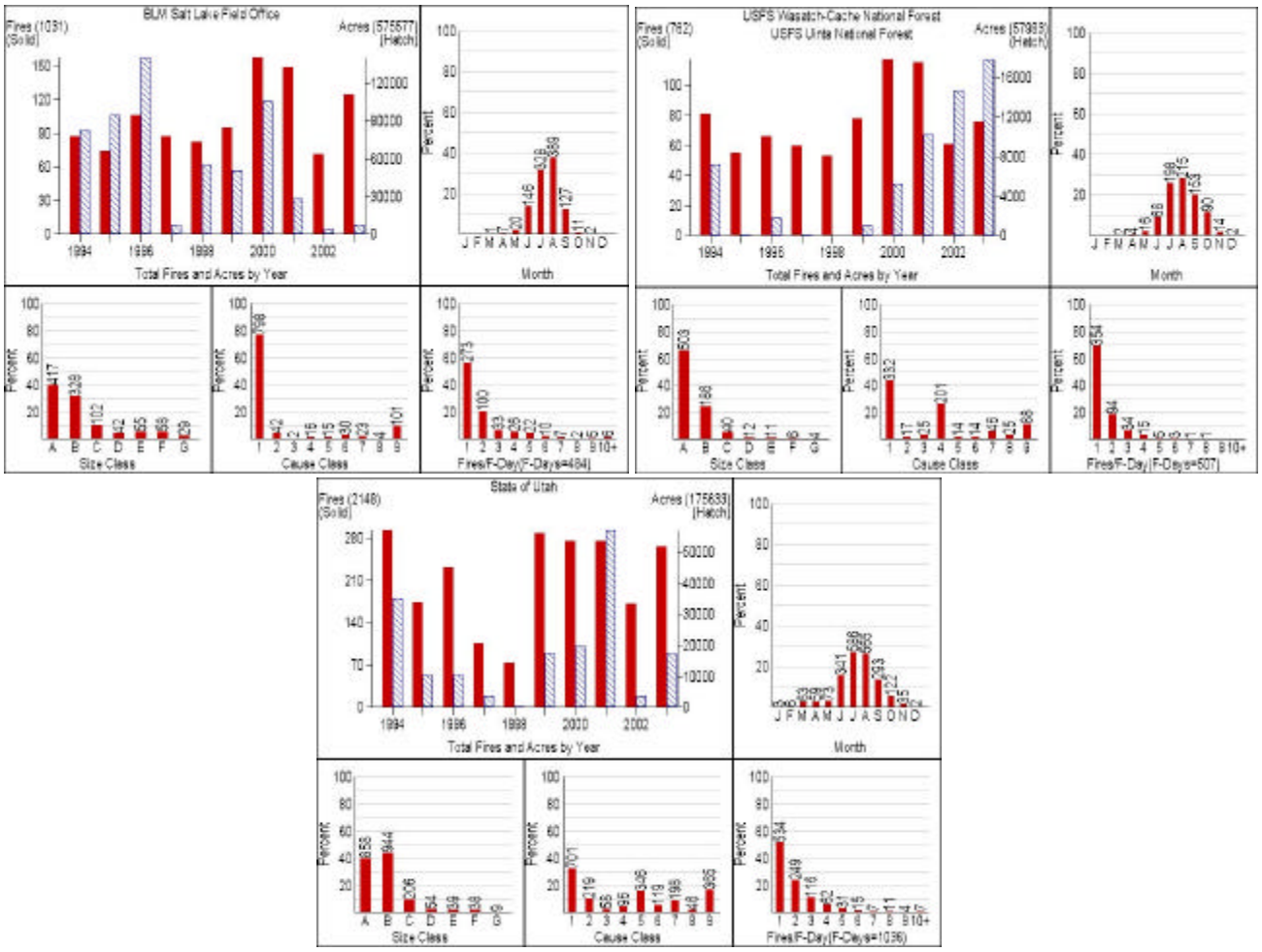
A. Wildland Fire Suppression

1. Fire Planning Unit Fire History



The ten-year (1994-2003) annual average for all fire causes is approximately 400 fires and 81,000 acres per year in the Fire Planning Unit (FPU). Human caused fires account for the majority (54%) of all fire causes; approximately 46% of fires in the FPU were lightning caused. Fires generally occur from May through October; however, fires have occurred in each month of the year. Multiple fire days consisting of 2 fires or more per day have occurred 776 out of 1311 days; this accounts for nearly 60% of all days when a fire is reported.

	10-Yr Fire Occurrence (1994-2003)			
			Cause (%)	
Agency	Fires	Acreage	Natural	Human
Bureau of Land Management	1,031	575,577	77%	23%
US Forest Service	762	57,983	43%	57%
State of Utah	2,148	175,633	33%	67%
FIRE PLANNING UNIT TOTAL	3,941	809,193	46%	54%


BLM Salt Lake Field Office
Fires (1091) (Solid)
Acres (575677) (Hatch)
Total Fires and Acres by Year
Month
Size Class
Cause Class
Fires/F-Day(F-Days=484)
USFS Wasatch-Cache National Forest
USFS Uinta National Forest
Fires (762) (Solid)
Acres (57983) (Hatch)
Total Fires and Acres by Year
Month
Size Class
Cause Class
Fires/F-Day(F-Days=507)
State of Utah
Fires (2148) (Solid)
Acres (175633) (Hatch)
Total Fires and Acres by Year
Month
Size Class
Cause Class
Fires/F-Day(F-Days=1036)

2. Suppression/Preparedness Actions

The Salt Lake Field Office utilizes Appropriate Management Response (AMR) which integrates resource management goals, objectives, and concerns with fire management activities. Key functions of this management philosophy are as follows:

- Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
- Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
- Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

The decision on whether wildland fires might be monitored, minimally suppressed, or aggressively attacked and the types of tactics used to suppress the fires would be based on decision criteria that would include firefighter and public safety, resource management objectives, resource values, other values at risk, fire season severity, predicted weather and fire behavior, suppression costs, and other criteria specific to the fire site and time of occurrence. Both direct and indirect attack suppression tactics are used.

Fire suppression emphasizes managing wildland fire in order to meet resource management objectives with the goal of safely reintroducing fire in ecosystems while minimizing costs and protecting values at risk. A “Full Suppression” strategy is implemented in areas where fire would not be desired (FMU polygons A and B) while a less aggressive “Resource Suppression” and “Natural Suppression” strategies may be utilized in the areas where fire would be desired or of no concern (FMU polygons C and D).

Due to this aggressive approach to fire suppression in the cheatgrass and desert shrub vegetation, and the need to more actively manage fires in upland areas dominated by sagebrush and juniper, the Field Office suppression strategy would require a fire organization capable of greater fire line producing capabilities. The primary pieces of fire equipment that have greater fire line producing capabilities are mechanical equipment. However, due to environmental concerns associated with this suppression resource, mechanized equipment has not been considered a preferred fire suppression tool. Fire engines, combined with air support from air tankers and helicopters, have proven effective in the A & B FMU polygons.

Suppression strategies and tactics in the juniper/mountain shrub types is modified to allow a greater use of “Resource Suppression” and “Natural Suppression” strategies and/or “indirect attack” methods when appropriate to meet resource management objectives while protecting values at risk and minimizing costs. Use of burning operations to aid in managing fires in the juniper/mountain shrub type is common. When extreme burning conditions, resource concerns, or values-at-risk warrant; a “Full Suppression” strategy with aggressive suppression is utilized in all fuel types.

Preparedness action guidance can be found in the Interagency Standards for Fire and Fire Aviation Operations (Red Book) and the Office of Fire and Aviation website at http://www.fire.blm.gov/

An interagency Fire Danger Operating and Preparedness Plan has been developed which clarifies the roles and responsibilities regarding appropriate preparedness actions. This plan is located in ***Appendix J.***

3. Fire Prevention, Community Education, Risk Assessment, and Assistance Activities

a) Prevention and Education Program
This field office has significant opportunity to participate in fire education, prevention and community assistance given that 86% of the population of the state resides within its administrative boundaries. The program in this office is interagency and interdisciplinary. For more information on any of the items discussed in this section, please see the Fire Prevention Plan in ***Appendix B.***

b) Enforcement:
The fire investigation and trespass (cost recovery) programs have been fully developed at this field office in cooperation with Law Enforcement, the Field Solicitor, and the United States Attorney's office. Costs will be recovered via both in-kind service as well as hard dollars. Standard operating procedures have been developed for cause determination and investigation. (See the Fire Prevention Plan in ***Appendix B***).

A field office sign plan and patrol plan have been developed and are part of the Fire Prevention Plan. Patrols will be conducted by the fire education/mitigation staff and engine crews.

c) Fire Education:
Fire education will be pursued for all ages with a special emphasis in the wildland urban interface, fire prevention, and the benefits of fire. The field office will use statewide and local programs in conjunction with Firewise principles to motivate community members to mitigate hazards. Whenever possible, fire education efforts will be coordinated on an interagency basis and on a statewide basis for maximum effect when needed. The field office will work closely with other interagency committees and groups to develop prevention campaigns, coordinate programs, and provide assistance to implement action plans. Committees include a statewide strategic communications committee, Utah Living with Fire Committee, and the Utah BLM Fire Education and Mitigation Group.

d) Community Assistance:
The field office will focus significant time on community assistance given the highly populated and growing communities adjacent to BLM land. Community assistance will be an interagency effort with the State of Utah and other agencies in cooperation with local government, organizations and private landowners or other potentially affected people. Communities will be guided to take on the responsibility of the hazard mitigation for private land. Hazard assessments will be completed in conjunction with each community considered at risk and community fire plans developed. The priority will be designated by interagency need,

community interest, and the total of risks, hazards, and values in a specified community. A community fire planning template was developed by the State of Utah Division of Forestry, Fire and State Lands that this field office uses.
Building and defensible space ordinances exist in Tooele and Utah Counties. Legislation was passed in 2004 that will require each county to complete a similar ordinance in order to receive wildfire suppression funds from the State of Utah.

e) Special Orders and Closures
The field manager has the authority to issue and rescind restrictions or closures on BLM land within the field office. Fire prevention orders (i.e., restrictions or closures) are coordinated and implemented on an interagency basis as described in the Northern Utah Annual Operating Plan. Any combination of factors may be present such as extreme fire danger, high fire occurrence, or exhaustion of fire resources and personnel due to statewide or geographic area fire activity. Consideration should be given to the timing of implementation and the notification of the public to ensure there is adequate notice.

f) Industrial Operations and Fire Precautions
Environmental documents and permits are reviewed by the fire education and mitigation staff for risk potential. Standard stipulations are incorporated into every special use and recreation permit that has potential to cause a wildfire.

The Adjective Fire Danger Rating notifies the public of the relative fire danger during the fire season.

g) Public Information
The SLFO is in a major media area with a large population, placing great demand for information about wildland fires on the area dispatch and field office personnel. The field office will have either on staff or available, information officers. The web site Utahfireinfo.gov is a public resource for current fire information and education statewide.

4. Annual Fire Training Activities

a) Qualifications and Fireline Refresher

The Field Office utilizes the Incident Qualification and Certifications System (IQCS) to record and maintain employee training, experience, fitness, and incident qualification records. Currently, the Field Office tracks approximately 130 employees in IQCS. This is a time-consuming (but critical) task which is accomplished by the fire staff Administrative Assistant in order for the Field Office Qualification and Certification Committee to review and approve. The Assistant Field Manager for the Fire Management division has the delegated responsibility for Red Card certification in conjunction with the committee.

Two sessions of the annual Fireline Refresher course are taught each year during the first week of May. A third session is taught in April for permanent fire staff personnel who will become the cadre for the May sessions. In addition, Work Capacity Tests (WCTs) are administered 10-12 times from March through May.

BLM Manual 9215 and the Interagency Standards for Fire and Aviation Management identified the qualification, training, and fitness requirements for BLM personnel with jobs associated with the fire management program.

b) Fire Season Readiness
Since the typical fire season begins during late May or early June, initial attack personnel and equipment must complete all required fitness and recurrency training during the first and second week of May. The Interagency Hotshot Crew must complete their critical training prior to activation, which usually occurs mid-May. The Field Office maintains Normal Use Stocking levels for three initial attack caches; one each at the Salt Lake Field Office, Muskrat, and Vernon Fire Stations

5. Detection
Detection is accomplished by both aircraft and ground patrols. Engines patrol areas affected by frequent lightning. Fixed-wing aircraft, which also functions as an Air Tactical platform, will provide reconnaissance after lightning transit through the area. When appropriate, the exclusive-use contract helicopter is used for low altitude detection missions. Early detection of fires is crucial for initial attack resources to minimize acreage burned.

6. FireWeather and Fire Danger
The Northern Utah Interagency Fire Danger Operating and Preparedness Plan can be located in ***Appendix J***.

7. Aviation Management
The Assistant Field Manager (Fire, Fuels, and Aviation Management) has the delegated responsibilities of the Unit Aviation Manager for the Salt Lake Field Office.

The Salt Lake Field Office has significant aviation activity throughout the year; primarily related to fire suppression. The SLFO administers three aviation contracts for an exclusive-use helicopter, Single Engine Air Tanker, and retardant. Due to the proximity of aircraft, it is common to have a mix of rotor and fixed-wing aircraft respond to fires during initial attack; consequently, the need for an Air Tactical Group supervisor is critical for safety and effectiveness. Airspace coordination is a significant workload; between the Class B airspace around the Salt Lake International Airport, air traffic along the Wasatch front, media aircraft, and military use airspace encompassed by the Field Office. Coordination with airport authorities is an on-going process. Non-fire special use flights are conducted for wild horse and burro census and roundups, emergency stabilization and rehabilitation, wildlife, and recreation projects.

FY	Flight Hours	Dollars
1994	181	$67,646
1995	170	$221,033
1996	480	$555,359
1997	147	$122,559
1998	179	$99,113

1999	41	$77,426
2000	851	$1,417,161
2001	767	$1,092,449
2002	623	$863,307
2003	962	$1,490,893

The level of aviation activity, combined with the complexities involved in operating aircraft on this Field Office would necessitate a stand-alone Unit Aviation Manager position to the Salt Lake Field Office Fire staff.

The unit aviation plan can be found in ***Appendix C***.

8. Initial Attack

Initial attack actions are based on firefighter and public safety, cost effectiveness, and values to be protected consistent with resource objectives, by using the full range of strategic and tactical options otherwise know as Appropriate Management Response (AMR) as described in the Fire Management Plan (FMP).

An interagency system of *runcards* (pre-attack plan) is updated each season by a group of representatives from all participating agencies within Northern Utah. A dispatch level is determined twice daily in accordance with the Fire Danger Operating and Preparedness Plan using NFDRS models. As a fire is reported, the dispatcher determines the appropriate dispatch zone and dispatch level. Based upon this information, pre-defined resources are dispatched to the incident. The *runcards* are used for all initial attack dispatches when a fire is reported and until a qualified initial attack incident commander arrives at the incident. The *runcards* are approved by the NUIFC oversight committee.

The closest available suppression resources are dispatched to an incident regardless of agency affiliation. When jurisdiction is determined, the responsible agency will assume incident command (or delegate command of the incident to a qualified incident commander).

Initial attack dispatch and fire reporting procedures are located in the Northern Utah Interagency Fire Center Mobilization Guide in ***Appendix F***.

9. Extended Attack and Large Fire Suppression

Due to the abundance of fine dead fuels in Northern Utah, the frequency of extended attack and large fire operations is high. Nearly 250 fires have exceeded 300 acres since 1994; over 40 have exceeded 5000 acres during the last ten years. Consequently, the emphasis on a smooth transition from initial to extended attack due to rapidly increasing incident complexity is important. In order to accomplish this, the development and retention of type-3 incident commanders within the Field Office suppression organization is critical. The Field Office FMO, AFMO, FOS (Fire Operations Supervisors), Helitack Supervisor, and some Engine Module Leaders are qualified (or trainee) Extended Attack (Type-3) Incident Commanders. In addition, the Forest Service and State of Utah have a few qualified Type-3 Incident Commanders.

Type 1 and 2 incidents occur regularly within the FPU. When these Incident Management Teams are mobilized, it impacts all agencies. Most often, these higher complexity incidents are multi-jurisdictional and affect several local, State, and/or Federal agencies. In addition, initial attack resources are usually drawn to support large fires for extended periods of time which diminishes the ability to suppress fires during the initial attack phase.

Direction for extended attack operations can be found in the Interagency Standards for Fire and Fire Aviation Operations.

10. Other Fire Suppression Considerations

B. Wildland Fire Use

1. Description of the wildland fire use opportunities

Wildland fires will either be managed for resource benefits or suppressed. Since a wildland fire cannot be managed for both objectives concurrently, fires will be suppressed utilizing an Appropriate Management Response (AMR). The management of naturally ignited wildland fires to accomplish specific pre-determined resource management objectives is not planned on BLM ownership within the Fire Planning Unit. An AMR will be determined based upon firefighter/public safety risks, weather/fuel conditions, natural/cultural resource management objectives, protection priorities, and values to be protected. The AMR enables the implementation of a broad spectrum of tactical options (from monitoring to intensive management actions) which is tiered to the FMU strategies and objectives identified in the FMP/LUP.

2. Preplanned Implementation Procedures

- N/A

3. Initial Action Procedures

- N/A

4. Required Personnel

- N/A

5. Public Information

Although wildland fire use is not currently implemented in these FMUs, public education and information will include the benefits of wildland fire use. These concepts are currently incorporated into fire education programs and information that is distributed to the public.

C. Prescribed Fire

1. Planning and Documentation

The prescribed fire program is fairly small and has been limited due to the aggressive expansion of cheatgrass throughout the field office. Expansion of the program should occur as planning efforts for future projects are being completed. A typical burning season would average one

broadcast burn of less than 500 acres and one pile burn of less than 100 acres. Focus has been on treating condition class 3 areas first. In June 2003, a 2400 acre cheatgrass burn was completed as part of a research project. This skewed the numbers for FY03 and do not represent an average year. Our sagebrush burning window in the spring of 2004 was missed and therefore the numbers are smaller than average for FY04. The fuels program maintains one plastic sphere dispenser (PSD), one 100 gallon truck-mounted drip torch tank with pump, 2 portable 25 gallon drip torch tanks with pump, 11 drip torches, and one flare gun.
All burns thus far have been in Condition Class 3 and moved each area closer to CC 2. Local contractors have not been used for prescribed burning due to the small numbers of acres burned each year. The following chart shows the prescribed burning program over the past 3 years:

	Actual treatments	Actual Acres
FY02	2	51
FY03	4	2,880
FY04	3	69

The prescribed burn season begins prior to green-up in the late winter/early spring for burning in the sagebrush-steppe and pinyon-juniper woodlands. Cheatgrass burns usually occur in June and/or September. Pile burns are planned and implemented during the winter months, usually when snow is present on site.

The SLFO Fuels Interdisciplinary Team is responsible for initiating, planning and prioritizing all fuels projects, including prescribed fire. The projects are listed by fiscal year in the Risk Assessment and Mitigation Strategies (RAMS) database which was completed in 2002 and runs through 2008. The projects listed in RAMS are then prioritized for each fiscal year based on:

Fuels reduction around Communities-at-Risk

1) Fuels reduction around Communities-of-Interest
2) Improvement of Condition Class from 3 to 2 or 1
3) Improvement of Condition Class from 2 to 1
4) Re-introduction of fire into ecosystems

The prioritized listing of projects for fiscal year 2005 is located in ***Appendix D***. Future project workloads are maintained in the RAMS database.

Collaboration is on-going, especially with the advent of the Northern Utah Fuels Committee. The committee has representatives from US Forest Service, US Fish and Wildlife Service, Bureau of Indian Affairs, Bureau of Land Management, National Park Service, Department of Defense, State of Utah Division of Forestry, Fire, and State Lands, and Weber, Box Elder, Rich, Tooele, and Utah County Fire Wardens. The committee works together on different projects within northern Utah and assigns priorities for those projects that fall within Focus Areas.

The field office coordinates with adjoining private landowners, homeowners associations, and individual communities. The Murphy Ridge B and Deseret #1 prescribed fires were planned with the assistance of the town of Bear River Wyoming, Deseret Land and Livestock, and the

Rich County Fire Warden. During Murphy Ridge B, both BLM and private lands were involved for better ecosystem management regardless of ownership.
Identified position needs to meet the prescribed fire workload are 3 qualified Type 2 burn bosses, 3 Type 2 ignition specialists, 2 holding specialists at the TFLD level and two at the ICT3 level, 4 Type 3 burn bosses and 2 plastic sphere dispenser operators.

Prescribed burn bosses are required to ensure that first order fire effects are monitored daily by a qualified individual. The fuels technician is responsible to collect the data and then analyze and display it in a monitoring report. The report is very specific and assists the burn boss and the fuels specialist in order to determine the effectiveness of the treatment as planned and implemented. Lessons learned are incorporated into future burn plans. Long term effectiveness is monitored by the fuels technician through vegetation transects that track the changes due to the treatment. The procedure for short and long-term monitoring is shown in the monitoring plan of the environmental analysis document for the project. The fuels technician accomplishes all monitoring according to the Salt Lake Field Office 10 year fuels monitoring plan.

Hardcopy maps displaying prescribed fire treatments since the early 1990's are located in the individual project folders. Due to the increased emphasis placed on the fuels program by the National Fire Plan of 2000, electronic maps of all fuels projects, including prescribed fire, since January 2002 are now maintained in Geographical Information System (GIS) by the Fire/Fuels GIS Specialist. Future treatments are also listed in GIS.

2. Air Quality and Smoke Management

Air Quality across the entire FPU is generally good, except for the areas along the Wasatch Front. There is a non-attainment area for PM10 in Salt Lake and Utah counties, and Ogden City. There is a non-attainment area for Sulfur Dioxide in Salt Lake County and a small portion of eastern Tooele County. There is a non-attainment area for Ozone in Davis and Salt Lake counties. There is a non-attainment area for Carbon Monoxide in Ogden, Salt Lake, and Provo/Orem cities. The field office does very little burning within these counties, however smoke from our burns can impact these non-attainment areas. Sound smoke management techniques are critical in reducing the likelihood for impacts to these and other smoke sensitive areas. Coordination with the Utah Interagency Smoke Management Coordinator ensures that permits will be issued by the Utah Division of Air Quality.

The Utah Annual Burn Schedule (Form 2) is due by March 15 annually. Pre-Burn Information (Form 3) is due two weeks before beginning ignition. Burn Requests (Form 4) must be submitted two business days before planned ignition and the Daily Emission Report (Form 5) must be submitted by 0800 on the day following the burn. All forms, instructions, and approvals for each burn are posted on the Utah Smoke homepage at www.utahsmp.net

Burning is only allowed when the Clearing Index (CI) is greater than 500. This requirement can be difficult to achieve due to the nature of winter conditions in Northern Utah when attempting to implement piles burning.

Many options are available to mitigate smoke effects. The one most commonly used is to ignite under conditions that facilitate high smoke lofting into the transport winds and carried over any non-attainment or smoke sensitive areas. The use of favorable wind directions can also be used

to completely avoid sensitive sites. Emission reduction techniques must also be used to some degree on every burn. These include using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires with short duration impacts, removing large diameter fuels mechanically or by hand, allowing the vegetation adequate time to cure or dry out, and quick mop-up. Ensure that good smoke trajectory maps have been produced showing the planned direction of day and night time smoke. Coordinate with the National Weather Service in Salt Lake City for a favorable forecast for smoke dispersion and direction.

3) Public Information

The public information effort on any prescribed fire will begin with the environmental analysis. A communications plan will be developed and followed for each project that outlines affected groups or individuals (may include private landowners, residents, permit holders, recreationists, and media), key messages, methods of delivery, and a schedule of implementation. This plan will cover all stages from issue identification to post-implementation. Prescribed fire information will be shared with adjacent agencies. Prescribed fires will be coordinated with community assistance efforts. Opportunities may be identified to use projects as public education tools on the benefits of fire, how fire managers use fire, and hazard mitigation. Mitigation measures that can be taken on private land will be a regular message in this communication.

D. Non-Fire Fuel Treatments

The following charts show the total fuels management workload within the field office.

FY02	Actual Treatments	Actual Acres
Mechanical	8	1,789
Rx	2	51
Other	3	510
Totals	13	2,350

FY03	Actual Treatments	Actual Acres
Mechanical	7	3,739
Rx	4	2,880
Other	9	5,110
Totals	20	11,729

FY04	Planned Treatments	Planned Acres
Mechanical	20	9,246
Rx	3	69
Other	8	3,000
Totals	31	12,315

Mechanical treatments have definitely increased recently and have become the most often utilized category for treatment acres within the field office. One reason for the increase in mechanical is that cheatgrass problems are more manageable with equipment than prescribed fire. Mechanical treatments that are being used include: hand thinning, hand piling, brush crunching, mowing, disking, and bullhog thinning. Dispersed disking treatments which reduce cheatgrass fuel loading and slow fire spread in Skull Valley, account for 1,500-2,500 mechanical

acres per year. Refer to section C 'Prescribed Fire' above for a detailed discussion of the burning program. Seeding is used for most Wildland Urban Interface treatments and falls under the category of 'other'. No chemical treatments have been completed yet, but are being planned for future use in order to curtail cheatgrass infestations.

The Salt Lake Field Office Fuels Interdisciplinary Team is responsible for initiating, planning and prioritizing all fuels projects, including non-fire treatments. The projects are listed by fiscal year in the Risk Assessment and Mitigation Strategies (RAMS) database which was completed in 2002 and runs through 2008. The projects listed in RAMS are then prioritized for each fiscal year based on:

a. Fuels reduction around Communities-at-Risk

b. Fuels reduction around Communities-of-Interest

c. Improvement of Condition Class from 3 to 2 or 1

d. Improvement of Condition Class from 2 to 1

All projects that have been completed since the National Fire Plan in 2000 have converted the treatment areas from Condition Class 3 to Condition Class 2. Only two proposed projects through fiscal year 2008 are for conversion from Condition Class 2 to Condition Class 1. The prioritized listing of projects for fiscal year 2005 is located in ***Appendix D***. Future project workloads are maintained in the RAMS database.

On average, 100 acres of juniper biomass from fuels management activities are made available each year for use by the public through firewood or fence post collection permits. The fuels and forestry staff within the field office are working with a contractor to make juniper biomass available at Hill Springs for the production of ethanol under a stewardship contract.

The goal of the fuels management program is to spend at least 50% of the project dollars allotted each fiscal year to complete treatments with local contractors. Past contract expenditures has been difficult to track, however the following chart shows acres accomplished by local contractors over the past three years:

	Acres completed by contractors	% of total acres
FY02	1,313	56
FY03	3,358	32
FY04	10,806 (planned)	88

The national IDIQ contract for bullhog work will be used for about 1,000 acres each year. Contracts will also be issued each year for about 1,000 acres of brush crunching, which is not listed in IDIQ yet. Another 250-400 acres of disking will also be contracted each year. The purchase of seed and the application of seed (aerial, drill, broadcast) for Wildland Urban Interface projects account for the 'other' acres listed in the charts above and are also completed through local contractors.

Public Information

Similarly to prescribed fire, public involvement for non-fire fuels treatments will start with the environmental analysis and a communications plan developed. Projects will be coordinated with community assistance efforts of this field office and other agencies. Opportunities may be identified to use projects as public education tools on hazard mitigation and to initiate the community fire planning process in a community at risk from fire.

E. Emergency Stabilization and Rehabilitation (ESR)

Summarize the fire planning units, stabilization, and rehabilitation program (see NFRP, ***Appendix E***).

Historically ESR workload for the past eight years has been approximately 21,590 acres a year. Acres treated have ranged from 59,371 acres in 2000 to 234 acres in 1997. Over half of the years have at least five digit figures that were considered for Stabilization or Rehabilitation.

Fiscal Year	Public Acres
2003	**4,522**
2002	**1,461**
2001	**15,300**
2000	**59,371**
1999	**19,970**
1998	**35,441**
1997	**234**
1996	**36,428**

Short tern objectives of ESR actions are to determine the need for and to prescribe and implement emergency treatments to minimize threats to life or property, and stabilize/prevent unacceptable degradation to natural and cultural resources resulting from the effects of fire.

To prepare for and implement the ESR program the line manager has direct organizational responsibility for managing the FMUs and directs the functional aspect of each emergency. This will involve directing a Burned Area Emergency Response (BAER) Team of interdisciplinary specialists, prepare a plan during and after the containment of wildfire, and prescribe and implement treatments. Usually a lead Resource Advisor would be designated for the BAER team.

BAER Team duties include:

1) Planning actions to stabilize and prevent unacceptable degradation to resources
2) Minimize threats to life or property resulting from the effects of fire
3) Develop monitoring plans to assure success
4) Evaluate the treatment recommend and develop further actions with a Rehabilitation Plan
5) Assist other disciplines in Restoration beyond the allotted recovery time for stabilization

ESR activities will comply with the NEPA, Department of Interior Manual DM 620, Part 3, Interagency Burned Area Response Handbook (version 4.0), Field Office Policy, and any pertinent federal or state laws.

ESR templates implementing treatment planning as well as cost of treatments provided by National and DOI policies. Form 1310-20 will be submitted to the State Office/and the Washington Office for approval of funding for any treatment before any on the ground implementation occurs.

1) BAER Teams will be formed and a Stabilization Plan will be submitted no later than 7 calendar day after containment of a fire.
2) Emergency Stabilization actions will be taken within one year of containment of the fire.
3) Rehabilitation actions must be taken within three years of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to a management approved condition.
4) ESR actions are aimed primarily at damage caused by the suppression effort itself and construction of protective fences, construction of water erosion abatement structures, aerial seeding, and drill seeding a mixture of grass and forb species to re-establish ground cover to hold soil in place.
5) In the short term, nonnative grass species (such as crested wheatgrass) may be seeded to promote soil stability and reduce the encroachment of cheatgrass and/or other invasive weed species.
6) Exclusion of livestock is critical for the recovery of any stabilization or rehabilitation project. Livestock, and wild horses will not be permitted until the vegetation has recovered or has been established (this is usually two growing seasons for a minimum).
7) Accomplishments of each plan are performance and fiscally evaluated, tracked and reported in the National Fire Operations and Reporting System for ESR tracking and project implementation.
8) Once the ESR treatment is completed and monitored, over a three year period, the project will be turned back to the Resource program for any further restoration and incorporated into the Rangeland Improvement Project System (RIPS).

Monitoring and evaluation of post-fire treatments are critical for understanding and improving ESR treatments. Collection and dissemination of information are valid parts of all ESR treatments on SLFO.

Each treatment specification must include provisions for monitoring, evaluation, and technique. Monitoring and reporting will be kept as simple as possible to insure the completion of all activities. Another aspect for treatment effectiveness is to monitor treatment failure and/or maintenance of treatments.

At a minimum, monitoring should have a base or control area, as well as, a data gathering phase ending with post treatment results.

Monitoring may be needed to determine if a treatment is needed (i.e. invasive species control).

Monitoring for invasive species will be an integral part of any ESR project. Prevention of any infestations of weeds or insect pests is the preferred method of control, and requires monitoring to prevent out of control situations

F. Community Protection/Community Assistance

1. Listing of Communities

There are 112 communities within the SLFO boundaries listed on the Communities at Risk list that was published in the Federal Register on August 17, 2001. The latest census has documented that 86 % of the population in Utah lives within the boundaries of the SLFO. The field office is a part of the Northern Utah Fuels Committee that coordinates and prioritizes fuels, wildland urban interface, and community assistance projects throughout the Fire Planning Unit. It should be noted that development is rapid in many wildland areas of northern Utah as urban areas expand. Other communities may be identified as "at risk" as urban growth continues into wildland areas and as communities may even define themselves.

a) The following 21 communities are those on the Communities at Risk list with which the field office is working most closely:

> Cedar Fort, Dugway (English Village), Eagle Mountain, Genola, Gold Hill, Ibapah, Lake Point Junction, Ophir, Park Valley, Pine Canyon, Rush Valley, Santaquin, Saratoga Springs, Terra, Tooele, Yost, Home Ranch, Skull Valley, Stockton, Dove Creek, and Woodruff. In addition, Evanston North, Wyoming, was listed on the Communities at Risk list prior to its incorporation as the City of Bear River, Wyoming.

b) There are an additional 18 communities the field office is working with that are not on the Federal Register list. However, these communities have been recognized as "communities at risk" by the Northern Utah Fuels Committee. They are: Grouse Creek, Etna, Rosette, Snowville**,** TL Bar Ranch**,** Laketown, Round Valley, Vista Grande, Mountain Fuel, Randolph, Herriman, High Country Estates #1, High Country Estates #2, Grantsville, Big Hollow, Lofgreen, Goshen, Payson, and South Willow.

c) The following table lists Communities at Risk in Idaho, Wyoming and Nevada that border the field office and is at risk from wildfire within the Salt Lake Field Office.

Idaho	**Wyoming**	**Nevada**
Stone Franklin Fish Haven Almo	Bear River Divide Bear River (Evanston North) Cokeville East Upton Upton Meeks Cabin	Goshute West Wendover Montello

2. Planned schedule for community assessment and fire planning.

The prioritization of Community Assistance projects is based on coordination of all projects by the Northern Utah Fuels Committee. Factors considered are the risks, hazards and values

present, the level of community involvement or interest in fire planning, and interagency needs. There is a substantial amount of effort in fire education that precedes a community's involvement. There are often unpredictable elements in the community dynamic that may delay the progress towards community fire planning and assessment.

Schedule of Community Fire Plans and Assessments

Fiscal Year 2004	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007
Park Valley/Rosette Home Ranch Dove Creek Grouse Creek/Etna Terra Vista Grande Bear River, WY	Laketown Ibapah South Willow Pine Canyon Cedar Fort Skull Valley Rush Valley High Country Estates #2	Dugway (English Village) Eagle Mountain Lake Point Junction Big Hollow	Lofgreen Gold Hill Yost Mountain Fuel Randolph TL Bar Ranch

Fiscal Year 2008	Fiscal Year 2009	Fiscal Year 2010	
Goshen Ophir Stockton Woodruff	Genola Payson Tooele Herriman	Santaquin Snowville Callao	

Communities that are currently working on fire plans and assessments:

Park Valley, Eagle Mountain, Cedar Fort, Home Ranch, Dove Creek, Ibapah, Grouse Creek, Terra, Vista Grande, Laketown, and Bear River, Wyoming. The communities of Saratoga Springs, Grantsville, and High Country Estates #1 have completed an assessment and fire plan.

3. Rural Fire Assistance

There are in excess of 80 fire departments within the field office boundaries. The field office works on a regular basis with over 40 of these departments that assist with fire suppression on BLM lands. Members of the fire staff meet regularly with the Box Elder, Tooele, Rich and Utah County Fire Chiefs Associations and county fire wardens in those areas. Rural Fire Assistance grant information is distributed each year and workshops have been held to assist departments in writing the grants. In the State of Utah, all federal grant monies available to communities are administered by the State per current state law but with oversight by an interagency committee. The field office will work with the state to distribute the grant applications, provide technical information and support, assess the needs of departments for prioritization of grant funds, and ensure the federal funds are used for their designated purpose.

V. Organization and Budget

A. Organization & Budget

The table below is the organization and equipment required to meet 100% of Normal Year Readiness.

Resource	IIAA Budget Item	Current Staffing (# of persons)	*Desired Staffing (# of persons)	Normal Activation		Current Cost ($)	*Proposed Cost ($)
Assistant Field Manager (FMO)	DFMOSLD	1	1	Yearly	2810/2823/2824	$96,750	**TBD**
Assistant Fire Management Officer (AFMO)	AFMOSLD	1	1	Yearly	2810/2823/2824	$74,293	**TBD**
Administrative Assistant	ADMIN ASST	1	1	Yearly	2810/2823/2824	$40,586	**TBD**
Education, Mitigation, Prevention	PREVPROGRAM	2	3	Yearly	2810/2823/2824	$117,237	**TBD**
Fire Operation Supervisor (West Zone)	FSTMGMUSKRAT	1	1	Yearly	2810	$61,680	**TBD**
Fire Operation Supervisor (East Zone)	FSTMGVERNON	1	1	Yearly	2810	$63,628	**TBD**
Type-4 Engine (Muskrat)	E4SLDMS401	3	5	May-Oct	2810	$72,000	**TBD**
Type-4 Engine (Muskrat)	E4SLDMS402	3	5	May-Oct	2810	$72,000	**TBD**
Type-4 Engine (Muskrat)	E4SLDMS403	3	5	May-Oct	2810	$72,000	**TBD**
Type-4 Engine (Rosebud)	E4SLDROSE	3	5	May-Oct	2810	$72,000	**TBD**
Type-4 Engine (Vernon)	E4SLDVN401	3	5	May-Oct	2810	$72,000	**TBD**
Type-6 Engine (Muskrat)	E6SLDMS601	3	5	May-Oct	2810	$72,000	**TBD**
Type-6 Engine (Vernon)	E6SLDVN601	3	5	May-Oct	2810	$72,000	**TBD**
Type-6 Engine (Vernon)	E6SLDVN602	3	5	May-Oct	2810	$72,000	**TBD**
Watertender (Rosebud)	WTROSEBUD	1	2	May-Sept	2810	$44,600	**TBD**
Watertender (Muskrat)	WTSLDMS201	0	2	May-Sept	2810	$2,000	**TBD**
Interagency Hotshot Crew	C1SLD	20	23	May-Sept	2810	$450,000	**TBD**
Type-3 Helicopter	H3SLD	9	9	May-Sept	2810	$208,000	**TBD**
Air Tactical Fixed-wing Aircraft/ATGS		0	1	May-Sept	2810	$0	**TBD**
Single Engine Air Tanker	STSLDEA401	1	1	May-Sept	2810	$33,800	**TBD**
Fire Center/Dispatch	DISPSLIFC	5	6	Yearly	2810	$116,900	**TBD**
Unit Aviation Manager	DAMSLDO	0	1	Yearly	2810	$0	**TBD**
Cache (Fire Center)	CACHESLIFC	0	1	May-Oct	2810	$8,000	**TBD**
Cache (SLFO)	CACHESLDO	0	0		2810	$8,000	**TBD**
Airport Lease		0	0	Yearly	2810	$8,000	**TBD**
Radio/Telecommunication Maintenance	MAINTRADIO	0	0		2810	$10,000	**TBD**
General Operating (Fire Stations, Fire Center)	GENOPERATING				2810	$20,000	**TBD**
Support Vehicles	SUPPV**				2810	$40,000	**TBD**
Training/Travel	FIRETRAIN				2810/2823/2824	$70,000	**TBD**
Hazardous Fuels Reduction	FUELSPROGRAM	5	5	Yearly	2823	$136,000	**TBD**
Fuels Crew		3	5	Feb-Nov	2823/2824	$78,000	**TBD**
Wildland/Urban Interface		4	5	Yearly	2824	$296,000	**TBD**
Contract Specialist		0	1	Yearly	2823/2824/2810	$0	**TBD**
Administrative Support (10%)	ADMSSLDO				2810/2823/2824	$284000	**TBD**
						$2,843,474	**TBD**

Fire Management Division UT024
Salt Lake Field Office
Bureau of Land Management

- **GS-0401-12 (PFT)** Assistant Field Manager (Fire management Officer) **Fire Management Division**
  - **GS-0455-11 (PFT)** Fire Center Manager
    - **GS-0455-09 (PFT)** Assistant Fire Center Manager
    - **GS-0455-07 (CS)** IA/Aviation Dispatcher
    - **GS-0455-07 (CS)** IA/Aviation Dispatcher
    - **GS-0455-07 (CS)** IA/Aviation Dispatcher
    - **GS-0399-02 (Temp)** Clerk/Receptionist
  - **GS-0301-11 (PFT)** Fire Education/Mitigation Specialist
    - **GS-0301-09 (CS)** Fire Education/Mitigation Technician
    - **GS-0455-05 (Temp)** Prevention Technician
  - **GS-0401-11 (PFT)** Fuels Management Specialist
    - ***Fuels Management Staff***
      - **GS-0455-07 (PFT)** Fuels Management Technician
      - **GS-0455-05 (CS)** Fuels Crewmember
      - **GS-0455-05 (CS)** Fuels Crewmember
      - **GS-0455-05 (CS)** Fuels Crewmember
      - **GS-0455-3/4/5 (Temp)** Fuels Crewmember
      - **GS-0455-3/4/5 (Temp)** Fuels Crewmember
      - **GS-0455-3/4/5 (Temp)** Fuels Crewmember
      - **GS-0401-11 (PFT)** NRS (Wildland/Urban Interface Coordinator)
      - **Non-renewable Resources Division**
        - **GS-0028-09 (PFT)** Environmental Specialist (Fuels)
        - **GS-0193-11 (PFT)** Archeologist (Fuels)
      - **Support Services Division**
        - **GS-0028-09 (PFT)** GIS Specialist (Fuels)
        - **GS-0028-09 (PFT)** Contracting Specialist
      - **Renewable Resources Division**
        - **GS-0401-11 (PFT)** Fire Ecologist (Fuels)
  - **GS-0401-11 (PFT)** Assistant Fire Management Officer (AFMO)
    - **GS-0455-09 (PFT)** Fire Operations Supervisor (East Zone)
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
    - **GS-0455-09 (PFT)** Fire Operations Supervisor (West Zone)
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** Engine Module Leader
        - **GS-0455-06 (CS)** Engine Crew Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-06 (CS)** Watertender Op
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-06 (CS)** Watertender Op
        - **GS-0455-3/4/5 (Temp)** Firefighter
    - **GS-0455-09 (PFT)** Interagency Hotshot Crew (IHC) Superintendent
      - **GS-0455-08 (PFT)** Assistant IHC Superintendent
      - **GS-0455-07 (CS)** IHC Module Leader
        - **GS-0455-06 (CS)** IHC Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** IHC Module Leader
        - **GS-0455-06 (CS)** IHC Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-07 (CS)** IHC Module Leader
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
        - **GS-0455-3/4/5 (Temp)** Firefighter
    - **GS-0455-07 (CS)** Single Engine Air Tanker Manager
    - **GS-0455-09 (PFT)** Helicopter Crew Supervisor
      - **GS-0455-08 (CS)** Asst Helicopter Crew Supervisor
      - **GS-0455-07 (CS)** Helicopter Module Leader
      - **GS-0455-07 (CS)** Helicopter Module Leader
      - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-3/4/5 (Temp)** Firefighter
      - **GS-0455-3/4/5 (Temp)** Firefighter
  - **GS-2101-11 (PFT)** Unit Aviation Manager

B. Assistance Agreements and Intra/Interagency Agreements

- Utah State-wide Cooperative Fire Management Agreement
- Utah Statewide Annual Operating Plan
- Annual Operating Plan between the USFS Uinta, Wasatch-Cache, Sawtooth and Caribou National Forests, BLM Salt Lake Field Office, NPS Timpanogos Cave National Monument and Golden Spike National Historic Site, BIA Uintah and Ouray Agency and The State of Utah Division of Forestry Fire and State Lands
- Annual Operating Plan for Fire Protection Between BLM, Salt Lake Field Office and BLM, Elko Field Office and BLM, Ely Field Office
- Memorandum of Understanding for Fire Protection Between BLM, Salt Lake Field Office and BLM, Burley Field Office
- Interagency Agreement between BIA, Phoenix Area Office, BLM, Nevada State Office, and BLM, Utah State Office
- Interagency Agreement for Fire Management among the BLM, BIA, NPS, USFWS, and Forest Service
- Interagency Agreement for Wildland Fire Management and Support between the USDI BLM, Salt Lake Field Office and Dugway Proving Ground
- Annual Operating Plan for Wildland Fire Management and Support between BLM Salt Lake Field Office and US Dept of Defense, Dugway Proving Grounds
- Annual Operating Plan, Northern Utah Interagency Fire Center Interagency Agreement
- Memorandum of Understanding between State of Utah Air Quality Board and USDI Bureau of Land Management, and the USDA Forest Service
- Agreement for Mutual Aid in Fire Protection between the US Air Force and BLM, Salt Lake Field Office.

The BLM has a Cooperative Agreement with the State of Utah and the U.S. Forest Service covering fire suppression on State, private, and Forest Service lands. This agreement is updated annually through a local Annual Operating Plan which addresses items such as initial attack responsibilities, cost sharing, and boundary line fires. In addition, BLM has the responsibility and financial liability to suppress fires that start on public land and also extends to State and private lands.

The Northern Utah Interagency Annual Operating Plan is a cooperative effort as mentioned above, and defines areas for suppression. By agreement, the Salt Lake Field Office fire program provides initial attack for all public lands within the FPU based upon the closest available resources concept.

As part of our agreement, the SLFO adheres to applicable state laws that apply to state and private lands. Some of these laws are:

65A-8-4. Uncontrolled fire is a public nuisance
Any fire on forest, range, or watershed land in the state burning uncontrolled and without proper and adequate action being taken to control or prevent its spread is a public nuisance.

65A-8-5. Fire control - County responsibilities

1) Counties shall abate the public nuisance caused by uncontrolled fire on privately owned or county owned forest, range, and watershed lands.
2) The state forester shall make certain that appropriate action is taken to control wildland fires on nonfederal forest, range, and watershed lands.

65A-8-7. Responsibilities of county sheriffs and district fire wardens in controlling fires
1) . . . the county sheriff shall take appropriate action to suppress uncontrolled fires on state or private lands.

Based on these suppression agreements and State Laws, it may be necessary for the BLM to take aggressive suppression action on 1) State and private lands adjacent to public lands; or 2) wildland fires that start on public lands and threaten State and private land.

C. Equipment Rental Agreements

A copy of the Equipment Rental Agreements can be located in the Field Office Service and Supply Plan.

D. Contract Suppression and Prescribed Fire Resources

A copy of the agreements/contracts for suppression resources can be located in the Field Office Service and Supply Plan.

VI. Monitoring and Evaluation

Monitoring is intended to assess the accomplishment of objectives and enables comparison of pre-treatment and post-treatment conditions. Fuels management objectives are substantially compromised if the effects of these actions are ecologically undesirable. A comprehensive monitoring program will likely include photo points and some form of vegetation sampling prior to implementation vegetation treatments. Monitoring of weather, fire behavior, and fuel consumption will occur during implementation of prescribed fire. After all treatments, monitoring should continue for a minimum of two years.

Current BLM National Office direction allows for both prescribed fire and non-fire treatment funds (2823/2824) to be utilized within one-year post fire or non-fire treatment and is designated for monitoring treatment objectives or specific protection objectives.

The SLFO annually tracks accomplishments through the BLM Management Information System (MIS) and through the National Fire Plan Operating and Reporting System (NFPORS), which is required by all federal agencies.

In order to evaluate the effectiveness of wildland fire management strategies in accomplishing goals/objectives, burned acreage within each FMU must be evaluated annually. The annual suppression acreage target for each Fire Management Unit has been identified in Chapter III. Once the decadal burn target has been reached, a review of objectives and strategies will be initiated to modify suppression criteria for the FMU.

VII. References

Health Forest Initiative http://www.whitehouse.gov/infocus/healthyforests/

National Fire Plan http://www.fireplan.gov/content/home/

Fire Management Planning for the Salt Lake Field Office, April 1998, UT-020-1998-0008

Interagency Burned Area Emergency Response Handbook, For the Emergency Stabilization of Federal and Tribal Trust Lands Version 4.0

SLFO Normal Fire Year Rehabilitation and Emergency Fire Rehabilitation UT-020-2001-0045

Environmental Protection Agency, http://www.airquality.utah.gov/PLANNING/Nonattnm.htm

Published Soil Surveys for Utah
NRCS Soil surveys are being completed and published on a continuing schedule. For ordering or obtaining information on reference copies, contact: State Conservationist P.O. Box 11350 Salt Lake City, UT 84147-0350. http://soils.usda.gov/survey/printed_surveys/utah.html

VIII. Attachments

Attachment 1: Implemented Fire Resources

Bureau of Land Management Implemented Fire Resources
Office: Salt Lake Field Office (UT-024)

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	8	26	141
Number of Water tenders:	2	1	6
Number of Dozers:	0	0	0
Number of Tractors / plows:	0	0	0
Number of Fire Boats:	0	0	0
Number of Type 1 Crews:	1	20	111
Number of Helitack Crews:	1	9	51
Number of Fuels Crews:	0	0	0
Number of Type 2 Crews sponsored:	0		0
Number of Smokejumpers (AK & NIFC only):	0		0
Number of Fire Management Officers:	1		11
Number of Assistant FMOs / FCOs:	1		11
Number of Fire Operations Specialists:	2		23
Number of Dispatchers:	4		30
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.):	1		6
Number of Mitigation/Education/Prevention Specialists / Techs:	2		22
Number of Resource Specialists:	3		34
Number of Fuels Specialists:	3		34
Number of Other Fire Staff:	1		11
Number of PFT funded by Preparedness:	10		
Number of Career Seasonals funded by Preparedness:	27		
Number of Temporaries funded by Preparedness:	32		
Number of PFT funded by Fuels:	6		
Number of Career Seasonals funded by Fuels:	0		
Number of Temporaries funded by Fuels:	6		

* In completing this table, only include Preparedness resource numbers funded by Fire Preparedness (2810) and reflect the peak fire organization resources for the year. Do not include resources funded under severity. The fuels related resources numbers are to include the resource funded by the non-WUI (2823) and WUI (2824) programs.

Attachment 2: Planned Fire Resources

Bureau of Land Management Planned Fire Resources
Office: Salt Lake Field Office (UT-024)

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	8	40	220
Number of Water tenders:	2	4	21
Number of Dozers:	0	0	0
Number of Tractors / plows:	0	0	0
Number of Fire Boats:	0	0	0
Number of Type 1 Crews:	1	23	130
Number of Helitack Crews:	1	9	55
Number of Fuels Crews:	1	6	48
Number of Type 2 Crews sponsored:	0		0
Number of Smokejumpers (AK & NIFC only):	0		0
Number of Fire Management Officers:	1		11
Number of Assistant FMOs / FCOs:	1		11
Number of Fire Operations Specialists:	2		22
Number of Dispatchers:	5		40
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.):	2		18
Number of Mitigation/Education/Prevention Specialists / Techs:	3		26
Number of Resource Specialists:	4		45
Number of Fuels Specialists:	3		34
Number of Other Fire Staff:	4		30
Number of PFT funded by Preparedness:	11		
Number of Career Seasonals funded by Preparedness:	30		
Number of Temporaries funded by Preparedness:	49		
Number of PFT funded by Fuels:	8		
Number of Career Seasonals funded by Fuels:	4		
Number of Temporaries funded by Fuels:	3		

IX. Appendices